

University of Louisville

**Graduate Catalog
2005-2007**

University of Louisville

2005-2007 Graduate Catalog

CollegeSource

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Fall 2005 — Spring 2007

Graduate Catalog

The Graduate School
105 Houchens Building
University of Louisville
Louisville, KY 40292
(502) 852-6495
<http://graduate.louisville.edu>

UNIVERSITY of LOUISVILLE[®]
dare to be great



Revised March 2006

The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4907; Telephone number (404) 679-4501) to award associate, bachelor, master's, doctoral, and first professional degrees (D.M.D., J.D., M.D.). The University of Louisville reserves the right to change programs of study, academic policies, academic requirements, fees, schedules of courses, procedures for the confirmation of degrees, or the announced academic calendar without prior notice.

The provisions of this publication do not constitute an express or implied contract between the University and any member of the student body, faculty, or general public.

The University of Louisville is an equal-opportunity institution and does not discriminate against persons because of race, religion, sex, age, handicap, color, citizenship or national origin. Inquiries or complaints about illegal discrimination including sexual harassment or handicap access can be made to the Affirmative Action director (852-6538) if response from the unit staff is unsatisfactory. The Redbook is the official statement of the organizational structure, the rules of governance and procedures and university wide policies of the University of Louisville. If there is any conflict between the policies, procedures or other statements contained within this catalogue, the Redbook shall govern. A copy of The Redbook is available on the university's web page at www.louisville.edu. Official copies are maintained by all University Libraries, the Student Government Association Office, and the student grievance officer. Other policies and information covering students can be found in the Student Handbook.

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General Information

Welcome

Experience the excitement of discovery. Create new knowledge in your field of study. Learn the practical applications of theory from world-class faculty. At the University of Louisville, we believe a graduate program should change your work...and your life.

U of L is a metropolitan research university with an attractive main campus in Kentucky's largest city and a Health Sciences Center in the downtown medical complex. Enrollment is more than 21,000, with 4,800 students pursuing graduate degrees.

Louisville is an exciting, vibrant city, centrally located within the United States. With lots of charm and much to see and do, from the cultural arts to sports, it is home to almost one million people from across the U.S. and around the world.

Ronald M. Atlas, Ph.D.
Dean of the Graduate School

The Graduate School

The University of Louisville is an urban institution that has had close historical and legal ties with the city of Louisville and Jefferson County (now Louisville-Jefferson County Metro). Founded in 1798 as Jefferson Seminary, later known as Louisville College, in 1846 it became the University of Louisville with an academic department and a medical school. Also in 1846, a School of Law was added, and a charter was obtained from the Commonwealth of Kentucky. Under that charter the University has functioned ever since. Currently, it includes the following units: College of Arts and Sciences, College of Business, College of Education and Human Development, Graduate School, School of Dentistry, Raymond A. Kent School of Social Work, Louis D. Brandeis School of Law, School of Medicine, School of Music, School of Nursing, School of Public Health and Information Sciences, and J.B. Speed School of Engineering.

In July of 1970, the University of Louisville officially entered the state university system of the Commonwealth of Kentucky, and thus began a new era of service to community, state, and nation.

Through the Graduate School, the University assumes its responsibility not only to teach but to contribute to the sum of knowledge. It encourages investigation, promotes research, and endeavors to organize the store of human knowledge to serve the needs of present-day life. By fostering the spirit of inquiry and research in the members of its faculties, it not only strengthens undergraduate instruction but also advances knowledge. Through its graduate courses, it furnishes advanced preparation for those who are planning to become investigators or

teachers in the social sciences, humanities, and natural sciences. Because of its location in a major metropolitan area, the Graduate School is very much aware of both the research opportunities and the obligations in teaching and public service that such a location presents.

The Graduate School of the University of Louisville was formally established in 1915, with advanced degrees awarded as early as 1907. Other advanced courses were offered by the Schools of Medicine and Law as early as 1856. It is a member of the Council of Graduate Schools.

The legislative functions of the Graduate School are vested in the Graduate Council which consists of elected representatives of the Graduate Faculty. The Council is responsible for establishing policies relating to graduate education and for maintaining a standard of excellence for graduate work within the University. The Dean of the Graduate School serves as chair of this body and of the Graduate Faculty.

The dean and the dean's staff are responsible for the administration of the rules and regulations of the Graduate School and are expected to maintain and safeguard the standards and policies of the school as outlined by the Graduate Faculty and the Graduate Council.

Graduate students participate in the operation and decision-making process of the Graduate School through the Graduate Student Union (to which all Graduate School students belong) and its executive committee, the Graduate Student Council, which consists of one elected representative from each duly constituted graduate student organization. A representative of the Graduate Student Council is a voting member of the Graduate Council. Students are actively sought as members of many of the standing committees of the Graduate School, and they are urged to participate and become involved in the administration of the Graduate School through these channels.

Mission Statement for the University of Louisville

The University of Louisville shall be a premier, nationally recognized metropolitan research university.

Source: Kentucky Postsecondary Education Improvement Act of 1997 (House Bill No. 1, Goal) Structure of the University

In accordance with the statutory authority of the Commonwealth of Kentucky, the Board of Trustees of the University of Louisville shall exercise final jurisdiction over the University. It shall select the President of the University; and upon recommendation of the President, it shall make all appointments of individuals in administrative capacities who serve at the pleasure of the Board. The Board of Trustees shall adopt a budget annually for the ensuing year and grant all degrees conferred by the University.

Graduate Degree Programs

At the present time the following programs for advanced degrees are available:

Doctor of Audiology – D.Au.

Doctor of Philosophy – Ph.D.

Anatomical Science and Neurobiology
 Applied and Industrial Mathematics
 Art History
 Biochemistry and Molecular Biology
 Biology
 Biostatistics: Decision Science
 Chemical Engineering
 Chemistry
 Civil Engineering
 Computer Science and Engineering
 Counseling and Personnel Services
 Clinical Psychology
 Curriculum and Instruction
 Educational Leadership and Organizational Development
 Electrical Engineering
 English Rhetoric and Composition
 Entrepreneurship
 Epidemiology: Clinical Investigation Sciences
 Experimental Psychology
 Humanities
 Industrial Engineering
 Mechanical Engineering
 Microbiology and Immunology
 Nursing
 Pharmacology and Toxicology
 Physics (Joint Program with UK)
 Physiology and Biophysics
 Social Work
 Urban and Public Affairs

Master of Accountancy – M.Ac.

Master of Arts – M.A.

Art (Creative) and Art History
 English
 French Language and Literature
 Higher Education
 History
 Humanities
 Interdisciplinary Studies
 Mathematics
 Pan-African Studies
 Political Science
 Psychology
 Sociology

Spanish
 Women's and Gender Studies

Master of Arts in Teaching – M.A.T.

Art Education
 Early Elementary Education
 Health and Physical Education
 Middle School Education
 Music Education
 Physical Education
 Secondary Education

Master of Business Administration – M.B.A.

Master of Education – M.Ed.

Counseling and Personnel Services
 Early Childhood Education
 Early Elementary Education
 Educational Administration
 Health and Physical Education
 Health Professions Education
 Instructional Technology
 Middle School Education
 Reading Education
 Secondary Education
 Special Education

Master of Engineering – M.Eng.

Bioengineering
 Chemical Engineering
 Civil Engineering
 Computer Engineering Computer Science
 Electrical Engineering
 Engineering Management
 Industrial Engineering
 Mechanical Engineering

Master of Fine Arts – M.F.A.

Theatre Arts
 Master of Music – M.M.
 Music Composition
 Music History and Literature
 Music Performance
 Music Theory

Master of Music Education – M.M.E.

Master of Public Administration – M.P.A.

Master of Public Health – M.P.H.

Master of Science – M.S.

Administration of Justice
 Anatomical Science and Neurobiology
 Biochemistry and Molecular Biology

Biology
 Chemical Engineering
 Chemistry
 Civil Engineering
 Communicative Disorders
 Computer Science
 Electrical Engineering
 Exercise Physiology
 Human Resource Education
 Industrial Engineering
 Interdisciplinary Studies
 Mechanical Engineering
 Microbiology and Immunology
 Oral Biology
 Pharmacology and Toxicology
 Physics
 Physiology and Biophysics
 Sport Administration

Master of Science in Epidemiology: Clinical Investigation Sciences – M.Sc.

Master of Science in Nursing – M.S.N.

Master of Science in Social Work – M.S.S.W.

Master of Science in Public Health – M.S.P.H.

Biostatistics: Decision Science
 Epidemiology: Clinical Investigation Sciences

Master of Urban Planning – M.U.P.

Specialist in Education – E.D.S.

Educational Administration – Instructional Leadership

Cooperative Ph.D. Program

The University of Louisville participates in a cooperative Ph.D. program in education administration with Western Kentucky University. To enroll in this program, a student must be admitted to both institutions. Those who complete the program will receive a diploma that states the degree is awarded by the University of Louisville in cooperation with Western Kentucky University.

Joint Degrees

Combined Juris Doctor and Master of Arts in Humanities (J.D./M.A.)
 Combined Master of Business Administration and Juris Doctor (M.B.A./J.D.)
 Combined Master of Business Administration and Engineering (M.B.A./M.Eng.)
 Combined Master of Business Administration and Master of Accountancy (M.B.A./M.Ac.)
 Combined Master of Science and Doctor of Dental Medicine (M.S./D.M.D.)

Combined Master of Science and Doctor of Medicine (M.S./M.D.)
 Combined Master of Science in Social Work and Juris Doctor (M.S.S.W./J.D.)
 Combined Doctor of Philosophy and Doctor of Medicine (M.D./Ph.D.)
 Combined Master of Science in Social Work and Master of Arts in Women's and Gender Studies (M.S.S.W./M.A.)
 Combined Master of Science in Social work and Master of Arts in Pan-African Studies (M.S.S.W./M.A.)
 Combined Master of Science in Epidemiology: Clinical Investigation Sciences and Doctor of Medicine (M.Sc./M.D.)

Graduate Certificates

African American Theatre
 Clinical Investigative Sciences
 Data Mining
 Environmental Engineering
 Family and Marriage Therapy
 Health Professions Education
 Latin-American Studies
 Logistics and Distribution
 Pan-African Studies
 Police Executive Leadership Development
 Women's and Gender Studies

Interdisciplinary Degrees

It is possible to establish interdisciplinary programs for individual students in the areas not represented by the traditional disciplines at Masters level.

Application to the Graduate School

It is the applicant's responsibility to consult the appropriate department, school or program for application deadlines and specific program requirements. The university reserves the right to change programs of study, academic requirements, tuition and fees, schedule of courses, the announced academic calendar and deadlines without prior notice.

Requirements for All Applicants (see below for details):

- Application
- Application fee
- Transcript(s)
- Letters of recommendation
- GRE/GMAT Test Scores

Additional Requirements for Some Applicants:

- PRAXIS II Speciality Exam
- Personal Statement

- TOEFL Examination
- Test of Spoken English

Application for Admission

Apply online at <http://graduate.louisville.edu>

A paper application is available at the Graduate School (to request an application be mailed, call the Graduate School at 502-852-3101).

Paper applications and each of the credentials listed below should be sent to the Office of Graduate School Admissions, University of Louisville, Louisville, KY 40292 at least six weeks prior to the beginning of the semester or summer session in which the student wishes to enroll; otherwise the application may not be reviewed in time for registration. Six weeks is a general deadline. Any program may have a different deadline and may require additional credentials or higher standards than those described in this General Information Section. Applicants should consult the pertinent departmental section of this bulletin or check directly with the department office.

The application and supporting documents become the property of the University of Louisville and will not be returned to the applicant or forwarded to another university.

If you do not enroll, your academic credentials will be retained in the Graduate School for two years.

Application Fee

A \$50.00 (US currency) non-refundable application processing fee is required. When applying online, the fee may be paid with a credit card or electronic check to College Net (details are provided online at the time of application).

If a paper application is submitted, payment must be made via check, money order or credit card. Checks should be made payable to the University of Louisville for the paper application only - be sure to include applicant's full name and birth date on the check.

Exceptions: Applicants who were accepted and enrolled in the University of Louisville Graduate School previously, and who have not attended another college or university since enrollment at UofL, do not have to pay the fee again. Students on any type of public assistance or who have a disability, may be exempt from the fee with supporting documentation.

Applications are processed when the application fee is received.

Transcripts

Official transcripts showing all degrees awarded and all undergraduate and all graduate work completed at all colleges/universities previously attended must be furnished by all degree-seeking applicants. The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution.

All transcripts that are not in English must be translated verbatim into English and must be notarized. International applicants may be required to have transcripts evaluated by a credential evaluation service:

World Education Services: www.wes.org

Educational Credential Evaluators: www.ece.org

Unofficial or faxed copies of transcripts will not be accepted.

Test Scores

The Graduate Record Exam (GRE) General Test is required for most programs. Test registration and information about the exam can be found at www.gre.org. The applicant must instruct the Educational Testing Service to forward the results to the Office of Graduate School Admissions, Belknap Campus, University of Louisville, Louisville, Kentucky, 40292. University of Louisville institution code for score-reporting is 1838.

The Subject Test Section may be required at the discretion of a department, and the applicant should consult the pertinent departmental section of this catalog.

The Kent School of Social Work does not require the GRE for the Master of Science in Social Work degree, unless the undergraduate grade point average is below a 2.75. Applicants to the Doctoral Program in the Kent School of Social Work must provide GRE scores.

Students may substitute the Medical College Admissions Test for the Graduate Record Examination with the approval of the department chair or graduate program advisor.

Graduate Management Admissions Test (GMAT) is required for all applicants to the College of Business degree programs. Test registration and information about the exam can be found at www.gmac.com.

Applicants, who have completed a terminal degree, may be exempt from submitting GRE or GMAT test scores pending departmental approval.

The PRAXIS II Speciality Exam is the certification exam students must pass in their subject matter to be certified to teach in Kentucky and will be required of all applicants applying to teacher certification programs. Information about the required PRAXIS II Speciality Exam Principles of Learning and Teaching (PLT) test and passing scores for the PRAXIS specialty exams in each certification area can be found at: http://kyepsb.net/TestingResearch/beg_tch_exams.html.

The College of Education and Human Development (CEHD) offers free classes to help teacher candidates prepare for the PRAXIS II Speciality Exam and the CEHD Dean's Office has copies of the PRAXIS Registration Bulletin.

PRAXIS toll free number: 1-800-334-8635.

Letters of Recommendation

A minimum of two letters of recommendation are required; however some departments require three (it is advisable to discuss admissions requirements with department representatives). It is recommended that the letters be written by someone who can speak to the applicant's academic and/or professional capabilities. Letters of recommendation may be sent via College Net (online application service), to gradadm@gwise.louisville.edu or by regular mail.

Personal Statement

Some programs require a personal statement, addressing specific issues pertaining to knowledge, work experiences, and/or interests in the chosen field of study. It is advisable to discuss admissions requirements with department representatives.

International Students

Students from foreign countries must meet three criteria before they can be granted admission: (1) they must meet the regular admissions standards as applied to all successful applicants, (2) if English is not the student's primary language they must show proficiency in English by scoring 210 or higher on the computer-based TOEFL examination or successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, and (3) approval from the University of Louisville International Center by presenting evidence of financial resources adequate to support their educational and living expenses in the United States for the duration of their studies. The award of a University Fellowship or Graduate Assistantship is considered evidence of adequate financial resources.

The Test of English as a Foreign Language (TOEFL) is required of all foreign students from countries in which English is not the native language. Applicants holding a baccalaureate or advanced degree from an accredited college or university in the United States are exempt from the TOEFL requirement.

Information about the times and places for the examination may be obtained from the Educational Testing Service, TOEFL, Princeton, New Jersey 08540 (<http://www.TOEFL.org>), University of Louisville Testing Services (<http://www.louisville.edu/student/services/testing/>).

Graduate programs may require higher TOEFL scores than the Graduate School minimum. Applicants who have not scored 210 or more on the computer-based TOEFL Examination may choose to apply to the Intensive English as a Second Language Program. Successful completion of the Advanced Level of this program will be considered adequate proof of the English proficiency required for course work in the chosen graduate program. Acceptance to the Intensive English Program does not constitute acceptance to the Graduate School. For information and application forms, write to: IESL, University of Louisville, Louisville, Kentucky 40292, U.S.A. <http://www.louisville.edu/a-s/iesl/>.

Students whose native language is not an American or British dialect of English may not be awarded teaching assistantships unless they present an acceptable score on the Test of Spoken English (TSE) or a locally administered teaching competency demonstration. Applications and information about the times and places for the TSE may be obtained from www.ets.org, TSE, Princeton, NJ, 08540. The teaching competency demonstration is administered by the Intensive English as a Second Language program <http://www.louisville.edu/a-s/iesl/>.

The International Center is your primary liaison with the Department of Homeland Security and the Department of State. International Center staff members are well informed about general immigration regulations and can advise you on proper compliance with DHS procedures. Make an appointment with the International Student Advisors to discuss specific questions or concerns. It is important that you do not rely on the advice of friends regarding immigration matters. Please refer to the International Center web page at: <http://www.louisville.edu/provost/intcent/>.

Admissions

Upon evaluation of the application and credentials, the department in which the applicant wishes to enroll forwards a recommendation concerning admission to the Graduate School. A recommendation for admission will specify the admission status and any conditions of admission. The official admission letter will come from the Graduate School.

Degree Status

In order for a student to be recommended unconditionally for admission to degree status, all admission credentials must have been received and evaluated. The applicant must have earned a grade-point average of at least 2.75 on a 4-point scale in either his/her complete undergraduate program or the senior-college years. Each student in this classification is a prospective candidate for an advanced degree and is expected to pursue a program leading to the master's degree, specialist's degree, or doctoral degree. Each applicant should consult the departmental sections of this catalog to determine any additional admissions criteria or any more restrictive requirements for admission to this status.

Degree Status - Provisional

This status is intended for students who have furnished their application and baccalaureate transcript but whose remaining application materials are incomplete. Students in provisional status must also meet the general academic requirements of their program. Students may not enroll for a second consecutive term in provisional status. Not all departments allow admission on a provisional basis.

Degree Status - Special Conditions

This status is intended for students who have furnished **all** application materials, but whose academic background is slightly below the minimum for their program. Students admitted in this status will be expected to meet certain criteria within a specific time-frame outlined by the admitting department.

Degree Status - Provisional/Special Conditions

An applicant who has both missing credential(s) and academic criteria below the minimum may be admitted in this status, pending program approval. Students in this status will be expected to meet certain criteria within a specific timeframe outlined by their program.

A student has one semester to furnish any missing admission credentials and clear any conditions made at the time of admission. Failure to complete the admission process within a semester may result in refusal of permission to register in the next semester.

A student admitted with an undergraduate grade point standing of less than 2.75 may be subject to departmental limitations on the number of hours in which he/she may enroll for each semester. Graduate credits earned prior to achieving good academic standing are not automatically applicable to the degree program.

Probation

Any student admitted with a point standing below 2.75 will be considered "on probation." Students who fail to attain the required 3.0 GPA or other higher GPA required by their program in the first term of enrollment following admission, or who do not meet any other departmental requirements outlined in the admission letter, may be subject to academic dismissal from their program.

No applicant with a grade-point average of less than 2.50 will be admitted to graduate study. Under unusual circumstances, exceptions to this policy may be made upon specific recommendation and documented justification for admission by the department chairman or graduate program advisor. Such justification must be provided in writing to the Graduate Dean, who must approve or disapprove the recommendation.

Non-degree status

Pending program approval, applicants who do not desire to seek an advanced degree may be permitted to enroll under non-degree status. Application credentials must include the application form, \$50.00 application fee and an official undergraduate transcript showing the award of a baccalaureate degree. Please note that not all programs will admit under non-degree status, thus it is advisable that applicants contact check with the specific department they wish to apply to if wanting to be admitted in non-degree status. Six hours of course work taken in a non-degree status may be applied to a graduate degree program with departmental approval.

Students may accumulate a maximum of fifteen hours while in non-degree status. Exceptions to this policy are the RANK I and II programs in the College of Education and Human Development, the Nurse Practitioner program in the School of Nursing, and certificate programs.

Auditors

Auditing at the graduate level is available only to persons who are enrolled in at least one course for credit, unless permission is granted by the department and Graduate Dean. The fee for auditing a course is equal to the tuition for enrolling in the class for credit.

The Graduate School does not require that auditors take examinations, submit papers, or take part in any evaluative activity. However, the instructor, at his or her discretion, may demand or deny the auditor's participation in class to whatever extent is deemed desirable. A "W" (withdrawn) shall appear on the transcript unless a student attends at least 75% of the classes.

Students wishing to audit courses must obtain permission in writing from the course instructor and program director. A graduate student may not satisfy a stated prerequisite for a graduate course or stated degree requirement through auditing a class.

Visiting Students

A graduate student from another university or college may enroll for graduate course work as a visiting student at the University of Louisville pending program approval. The visiting student is responsible for having the home institution provide a letter certifying that the student is in good standing as well as approving the transfer of credits from the University of Louisville to the home institution at the end of the semester. A graduate application is required and transcripts may also be required by some departments.

University of Louisville graduate students who attend another Graduate School as a visiting student must have the permission of their department chair or adviser before the courses are taken in order to transfer credits earned. Visiting student status may be granted only to a student who is in good standing.

For the New Graduate Student

Overview

The University of Louisville operates on a semester system that includes a Fall Semester, Spring Semester, and Summer semester with multiple terms. The University has a computerized admissions and registration system. Students are advised to include their full name and date of birth on all correspondence with the University to facilitate the identification of admission credentials and requests for information. Students

who do not enroll for the semester for which they apply may be required to reapply and resubmit credentials. The University holds credentials on applicants for a limited time.

Student Responsibility

It is the responsibility of the graduate student to become familiar with and observe all policies and requirements of the Graduate School and of his or her particular degree program and department. Policies, procedures, and requirements are subject to change, and it is the responsibility of the graduate student to keep her/himself apprised of current regulations. All students must respond to official notices issued by administrative offices and instructors, whether these notices be posted on official bulletin boards, are sent through postal, or e-mail. A student's status is not dependent upon a written notification but is a consequence of circumstances in the admission process and the student's academic performance. Written notification is simply a verification of status.

Graduate Credit

Courses listed in this catalog are offered for graduate credit. To receive graduate credit, a student must register for the course through the Graduate School or through another graduate-level program, such as the Master of Engineering. Students who take these courses as post-baccalaureate registrants do not receive graduate credit.

Prerequisites

Prerequisites for all courses include graduate status and the consent of the graduate advisor (for registration). Specific course prerequisites are indicated in the course listing in the curriculum listing of this catalogue.

Academic Policies, Procedures and Requirements

The general policies, procedures and requirements for advanced degrees are stated below; however, each advanced degree has requirements, specific to that degree. These specific requirements are detailed in the program descriptions that follow this section. These requirements must be consulted, so that the graduate student may be fully apprised of the conditions he/she must meet in order to receive an advanced degree.

The policies and regulations described in this catalog cannot be superseded or invalidated by either oral or written agreement with faculty, staff, or administrators, unless such agreement is confirmed in writing by the Dean of the Graduate School.

Registration

The University of Louisville uses a touch-tone and an on-line web registration system. The schedule of courses for each term may be reviewed at <http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>. A limited number of paper copies of the schedule may be available through the Registrar's Office, Dean's Offices, or Campus Bookstore. Students must first contact their department advisor to discuss course selections. The service indicator is changed within the department. If a student is in good standing and admitted UNCONDITIONALLY, he/she may proceed with the registration process. If, however, a student still has conditions on his/her admission, he/she must contact their department for further instructions. If a student is on academic probation, he/she must contact the Graduate Dean's office for further instructions. A student must participate in touchtone or on-line web registration. No in-person registration is permitted. A student may add courses through the touch-tone or on-line system through the first day of classes. One may also drop or withdraw from courses by touch-tone or on-line (for more information consult: www.louisville.edu/student/services/registrar)

Full-and Part-Time Study

Full-time study is defined as being nine (9) hours of credit during a regular semester or six (6) hours during the summer term or in candidacy status. To be considered in full-time residency for one year, a student must be registered for nine hours in each of two consecutive semesters.

Full-Time Study for University Fellows and Graduate Assistants

All University Fellows and Graduate Assistants must be enrolled as full time students during the period for which they are receiving financial support.

Course Loads

Unless a department or program requires a larger number of hours for all full-time students, the maximum number of hours that may be taken in a regular semester is 12; or 15 hours if 3 or more hours are research credit. The maximum number of hours that may be taken in the summer session (both terms) is 12, including research hours.

Overloads

Any student who wishes to enroll in more than the maximum number of hours must obtain the permission of the Dean of the Graduate School. Permission to enroll for excess hours is rarely granted.

Continuous Enrollment

Continuous enrollment is defined as being registered in both fall and spring if registering for coursework. If a student has been admitted to either masters or doctoral candidacy, continu-

ous registration is defined as fall, spring and summer terms (only one term of registration is required in summer terms).

Satisfactory Progress

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who fail to enroll for a period of more than 12 months will be considered to have withdrawn from the program. Students who seek to return after such a period of time are required to apply to their departments for readmission. Based on the request of the department, the Dean of the Graduate School will consider the student for readmission. Prior to reapplying, students should speak with their department. Students may submit a re-enrollment form to the Office of the Registrar if it has been less than two years since their last enrollment.

Satisfactory progress also involves maintaining the standards of academic and professional integrity expected in a particular discipline or program and, in some disciplines, may include demonstration of the ability to function as a professional practitioner. Failure to maintain these standards or demonstrate such abilities may result in termination of the student's admission to the program.

Degree Candidacy

Degree Candidacy is intended to meet the enrollment need of students who have enrolled for all formal course work and thesis/dissertation hours but who are continuing to perform research for the Masters or Doctorate degree or complete course requirements in other required coursework. It is the responsibility of the student and his/her mentor to maintain contact throughout the program of study to ensure continuous progress towards the timely completion of the degree.

Doctoral students may not enroll in Degree Candidacy until successful completion of the qualifying exam in addition to completion of the major portion of their required program of study.

Although a student must complete all required courses before entering Degree Candidacy, students have the option of taking additional specialized courses, e.g. courses offered by visiting or new faculty, while in Degree Candidacy (in those cases payment of both the candidacy fee and the course tuition will be required).

When necessary, a student may enroll in Degree Candidacy in order to meet the requirement that all students must be enrolled in the Graduate School during the semester in which he/she wishes to graduate, e.g. students in their final semester, who need to be full time students and who have less than nine hours in fall or spring or less than 6 hours in the summer to complete the degree, may enroll in Degree Candidacy.

Enrollment in Degree Candidacy requires the approval of the Graduate School. Once a student is admitted to candidacy, enrollment in Degree Candidacy status must be continuously maintained year round (i.e. Fall, Spring, and Summer) until the

degree is awarded. The only exception to this policy of continuous enrollment is if the Graduate Dean has granted the student a formal leave of absence.

Once a student enrolls in Degree Candidacy, the Registrar will automatically enroll the student in Degree Candidacy until the student applies to graduate. Failure to pay the candidacy fee will be cause to cancel a student's Degree Candidacy. In order to restore Degree Candidacy, the student must receive approval of his/her department Chair and that of the Graduate Dean. To re-establish Degree Candidacy, the student will be required to pay the candidacy fee for each semester during which candidacy was voided and/or not maintained.

Academic Standing

Good Standing

A graduate student is in good standing when his/her graduate grade point average is 3.0 or higher. Graduate grade point average includes all coursework listed on a graduate transcript, whether the courses are undergraduate or graduate-level. A student must be in good standing in order to receive their degree.

Academic Probation

A student who has a graduate GPA which falls below a minimum level of academic quality (3.0 on a 4-point scale) will be placed on academic probation until the student regains a 3.0 average or is dismissed. Students are ordinarily not permitted to continue on academic probation for more than one semester. Upon request of the student's academic department, the Graduate Dean may approve continuation beyond a single semester.

Plagiarism and Cheating

It is expected that a student in the Graduate School will refrain from plagiarism and cheating. Plagiarism and cheating are serious breaches of academic conduct and may result in permanent dismissal. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. A plea of ignorance is not acceptable as a defense against the charge or academic dishonesty.

Extension of Time

Requests for extension of time must be submitted in writing to the Chair or Graduate Coordinator of the student's department. Once reviewed by the department, the request is forwarded to the Graduate Dean with supporting documentation for his review. While extensions of time are rare, each request is reviewed thoroughly with an appropriate outcome communicated to all interested parties. Students must be considered in good standing for the request to be considered.

Policy on Student Leave of Absence

The Graduate School. A student who has been accepted into a graduate program is expected to remain in continuous enrollment, either full-time or part-time, throughout his/her matriculation. Students who fail to enroll for a period of more than 12 months will be considered to have withdrawn from the program. Once a student enters candidacy, he/she must maintain continuous candidacy (fall, spring, summer) and pay the appropriate candidacy fee.

However, if circumstances arise that may cause an interruption in graduate study; a student may apply for a leave of absence by requesting such a leave from the Dean of the Graduate School. The letter of request must indicate the dates on which the requested leave is expected to start and end. The student's request must be accompanied by a letter of support from the graduate program director or coordinator or from the department chair. A requested leave cannot exceed one year; however, under extreme circumstances, a second, subsequent request may be granted by the Dean of the Graduate School. Students must be considered in good standing for the request to be considered.

If a leave is granted, the student may NOT enroll in any classes, including independent study, seminars, distance learning, thesis research, or dissertation research. A student on official leave of absence is not required to pay tuition, fees, or a candidacy status fee; but is not entitled to any services from the university during the leave, including mentorship from faculty.

If a leave of absence is granted to a doctoral student in candidacy, the time limitation of completing all other requirements within four years after passing the qualifying examination shall be extended by the same time as the length of the leave. The time limit stipulating that credit earned more than six years prior to the completion of the degree may not be counted is NOT automatically waived during a leave of absence. However, an appeal for an extension of this time limit, specifying the exact circumstances, can be included in the request for a leave or submitted in a subsequent letter to the Dean addressing this particular matter at the time of re-enrolling.

No degree will be granted to a student on official leave of absence. The student must re-enroll in the next term following the conclusion of the leave and be enrolled in the term in which a degree is granted. A leave of absence does not relieve a student from adherence to policies regarding residency and candidacy (except that the time limit for candidacy may be extended, as indicated in the previous paragraph).

The award of a Doctor of Philosophy degree indicates that a student has attained mastery of a field and has demonstrated the capacity to perform independent scholarly research and to appreciate the importance of that research within the broad context of his or her discipline. Accordingly, no specific minimum number of credit hours has been established for Ph.D. programs. However, it has been customary to consider the equivalent of three years of full-time graduate study as minimal.

Course and Credit Requirements

Transfer of Credit

Earned graduate credit may be transferred from accredited institutions that offer advanced degrees. The maximum number of semester hours transferable, upon request, is six. Up to six additional hours may be requested, in a master's program, provided that these additional hours are not credit earned by extension, thesis or practicum and provided also that the residency requirement of 24 semester hours is maintained by the addition of University of Louisville credits to the total program.

In unusual circumstances, a lesser residency credit requirement may be considered by the Graduate Council. Requests for such exceptions must be supported by the major department and the program adviser. In no case will a master's degree be awarded to a candidate who has completed fewer than 18 semester hours at the University of Louisville. Final approval rests with the Graduate Council.

Credit earned more than six years prior to the student's application to the Graduate School of the University of Louisville will not normally be considered for transfer; however, the Graduate Council and the Dean may make an exception upon the recommendation of the student's department.

The course work being considered for transfer must have been taken while the student was enrolled in an accredited graduate or professional school and must be evaluated for transfer by the head of the department in which the student is seeking additional graduate work. Six hours may be transferred from previously earned master's degrees toward a second master's degree, subject to the approval of the second degree program and the Dean of the Graduate School. Hours earned toward a culminating experience such as a thesis, practicum, or internship shall not be transferable to the second master's degree. Only courses in which the student earned grades of "B" or better will be considered for transfer. Hours and quality points earned at other institutions are not included in the calculation of a student's GPA.

Courses in which grades of "P" were earned must have the approval of the Graduate Dean in order to be transferred. In case of question regarding the transferability of course work, the Graduate Council is empowered to decide.

Courses requested to be transferred that have been taken on the quarter system are equivalent to two-thirds the credit hours at the University of Louisville.

Transfers of credit from constituent schools and colleges of the University of Louisville are not subject to the above limitations on transfers but require the recommendation of the student's department and the approval of the Dean of the Graduate School.

Course Numbering System

Courses with numbers from 500 to 599 may be open to both advanced undergraduate and graduate students and can be taken by graduate students for graduate credit. Those numbered 600 and above are primarily for graduate students.

Graduate students who wish to receive graduate credit for 500-level courses must demonstrate a level of mastery of the course material substantially above that required for undergraduate credit. This mastery must be verified in writing by the instructor if graduate credit is requested after course is completed.

Demonstration of an appropriate degree of mastery may include term papers, independent study, comprehensive examinations, or other more stringent requirements than those applied for undergraduate credit. The nature of the differences between the requirements for graduate credit and those for undergraduate credit must be described in course syllabi.

Only those 500-level courses that appear in this catalog are available for Graduate School credit. The student is advised to consult his/her department for information on any particular 500-level course.

Undergraduates Taking Graduate Courses

Undergraduate students with special permission of their undergraduate dean, the Dean of the Graduate School, and the instructors in the courses involved may register in graduate courses, including those at the 600 level. It is understood that such courses will replace courses in the normal undergraduate curriculum and therefore cannot be used for subsequent graduate credit. The student should be registered for at least one undergraduate course if requesting to enroll in a graduate course.

Undergraduate students at the University of Louisville who are within six semester hours of completing the baccalaureate requirements may register in graduate courses, including those at the 600 level, with the permission of the undergraduate dean, the Dean of the Graduate School, and the instructors involved. Subsequent graduate credit can be obtained only if these courses have not been used to satisfy part of the baccalaureate requirements, and if the recommendation of the chairman of the department involved and the approval of the graduate dean are obtained. Exceptions are those students enrolled in an accelerated Bachelor/Master's program in the College of Arts and Sciences.

Grades and Grading

University Grade Point Average (GPA)

The GPA appearing on the University transcript at the end of each semester of enrollment will be the official GPA for determining Graduate School academic standing. The GPA will be

based upon all courses taken at the undergraduate and graduate level. Courses taken at the 500-level and above will be counted as graduate courses. The University transcript may only include up to a maximum of 6 credit hours in undergraduate coursework. Any undergraduate courses beyond this 6 credit hour limit must be taken pass/fail. While possibly including undergraduate coursework, this transcript will determine the overall Graduate GPA. The post-admission advising office with the Graduate School will monitor this Graduate GPA.

Grading System

The Graduate School utilizes a plus/minus grading system. It is at the discretion of the instructor to determine the use of plus/minus grading.

The following is the grading scale:

Grade	Quality Points		Grade	Quality Points
A+	4.0		C	2.0
A	4.0		C-	1.7
A-	3.7		D+	1.3
B+	3.3		D	1.0
B	3.0		D-	0.7
B-	2.7		F	0.0
C+	2.3			

C Grades

The student's academic department may approve six hours of coursework in which a grade of "C+", C, or C-" was received to count toward the completion of degree requirements. Approval of the Graduate Dean must be secured in order to count additional hours with any grade of C in any course required in the degree program.

In no case may more than nine hours of "C" be used to fulfill graduate degree requirements. Some programs may not permit any courses in which a grade of C+, C, or C- has been earned to be used in fulfillment of degree requirements. Although grades below C- will be calculated in the graduate student's grade point average, courses in which these grades have been earned will not be counted towards the fulfillment of degree requirements.

Other Grades

"W" - means Withdrew and carries no quality points. No student may withdraw from any course after the published drop date. In exceptional cases, the dean may grant a student's request to withdraw from courses because of illness or conditions beyond the student's control. Poor performance is not a valid reason to grant an exception.

"I" - means Work in Course Incomplete. If the work is not completed by the end of the next term, regardless of whether the student is enrolled, the "I" automatically becomes an "F".

"X" - means course work has not been finished because of the nature of the research or study involved, e.g., thesis work. This grade is reserved for courses that by their nature extend beyond one semester. This grade may not be used for course-work that is confined to a semester but not completed by the student. During the time an "X" grade is carried on the transcript, continuous enrollment is not required.

Graduate students enroll in courses on a term basis. Graduate courses may not be extended beyond the enrollment term, except as noted for open-ended courses eligible for the "X" or deferred grade. An "I" grade does not extend the course, but rather extend the time a student has for completion of work assigned in the course. The "I" must be removed within one semester and the new grade assigned for the term in which the student was originally enrolled or the "I" is changed to an "F".

Pass/Fail Grading Option

Each department has the discretion of extending a Pass/Fail option to any or all of its graduate students and graduate courses.

Because the advisability of such an arrangement varies from department to department, each department, subject to approval of the Graduate Council, works out the arrangement that is most suitable. The student is referred to his/her departmental chair for details.

When using the Pass/Fail option for graduate students enrolled in graduate courses, A+ through C will be passing grades and D+ through F will be failing grades.

Changes of Grades

No changes of grades can be made without a request and explanation on the part of the faculty member giving the grade and the approval of the Dean of the Graduate School.

Missing Grades

All missing grades will be changed to failing grades one year after the completion of the semester in which the course was taken.

Repetition of Courses

A student who has received the grade of "C" (in a course that is a degree requirement), "D" or "F" may repeat that course upon the approval of the graduate program adviser and the graduate dean. When a student repeats a course, the grade point average will be calculated on the basis of the last grade earned, although all previous grades will remain on the transcript.

Requirements for Graduate Degrees

Requirements for the Doctor of Philosophy Degree

In addition to the particular rules of the various departments as stated in their sections of this catalog, the following general rules apply to all Doctor of Philosophy programs.

The award of a Doctor of Philosophy degree indicates that a student has attained mastery of a field and has demonstrated the capacity to perform independent scholarly research and to appreciate the importance of that research within the broad context of his or her discipline. Accordingly, no specific minimum number of credit hours has been established for Ph.D. programs. However, it has been customary to consider the equivalent of three years of full-time graduate study as minimal.

Application for the Doctorate

To become an applicant for the doctorate, the student must be admitted to the Graduate School (see previous sections on Admission to the Graduate School and Admission Statuses) and be accepted by the department of specialization. Only students with exceptional scholarship and originality are accepted for work towards the degree of Doctor of Philosophy, and departments are expected to have more restrictive criteria for admission to this program than those for admission to a master's degree program.

The degree is not awarded solely upon completion of a curriculum of prescribed courses, even though the student has done superior work in them; rather, it is awarded in recognition of creative scholarship as demonstrated by a substantial contribution in the candidate's chosen field. Only students who offer promise of meeting this high standard will be accepted by a department to begin work toward this degree. The prospective student should consult in person with the department in which he/she wishes to major.

Program of Study

Each applicant for the doctorate is expected to take such courses as may be required for the advancement of scholarship in general and for training in his/her field of specialization. The major professor shall design a program of study to fit the needs of the individual student subject to approval by the department's graduate program committee and/or department chair. This program may be modified at any time upon the recommendation of the major professor and approval of the department head and the graduate dean. The program will consist of a major field and such minor fields as the major professor and the department head may agree upon.

All courses offered by the University, at any level and in any school, shall be accessible to the doctoral student, subject to approval by the instructors. The student is expected to receive high marks in these courses; grades lower than “B” will usually be regarded as evidence of poor scholarship and may bar the student from admission to candidacy.

Residency

In order that the student may be assured of an opportunity to utilize the educational facilities properly and to participate in the intellectual life and research atmosphere of the University, at least two years of study must be spent at the University of Louisville and at least one must be spent in full-time residency.

To be considered in full-time residency for one year, a student must be registered for 9 or more hours in each of two consecutive semesters.

Foreign Language Requirement

Foreign language proficiency is no longer a general requirement of the Graduate School. However, certain departments may have established such requirements, which will be specified in their sections of this Catalog.

Where no other provision has been made by the major department, a graduate student must establish his or her proficiency in computer language by successful completion of ESC 102, FORTRAN, in the Speed Scientific School, or by passing an equivalent examination administered by the Speed School.

Qualifying Examination and Candidacy

The applicant for a Doctor of Philosophy degree must pass a qualifying examination, oral or written, or both. Its purpose is to verify that the student has sufficient understanding of and competence in his/her field to become a candidate for the degree. This examination may be referred to by some departments as the preliminary, comprehensive, or candidacy examination.

To be eligible for this examination, the student must have satisfactorily completed the major portion of the prescribed course work and must have met the foreign language requirement, according to departmental policy. It is the student's responsibility to be aware of departmental policy on the consequences of failure of all or part of the examination. A student who fails the examination may not be allowed to retake it more than once.

A doctoral degree student must have been admitted to candidacy not later than the end of the ninth month prior to the awarding of the degree, that is:

- August graduation-November 30 of preceding year
- December graduation-March 31 of same year
- May graduation-August 31 of preceding year

Although the prescribed course work may have been completed, the candidate must maintain an active registration status until the degree is awarded (see previous section on General Academics Policies and Requirements, subsection Maintaining Candidacy).

Time Limitation

The candidate must complete all other requirements for the degree of Doctor of Philosophy within four calendar years after passing the qualifying examination. In exceptional cases, the Dean of the Graduate School is empowered to grant limited extensions of this four-year period.

Dissertation

A dissertation is required of all candidates for the degree of Doctor of Philosophy. It is to be a scholarly achievement in research, and should demonstrate a thorough understanding of research techniques in the field of inquiry and the ability to conduct independent research.

The dissertation is to be submitted in completed form to the head of the major department at least thirty days before the end of the term in which the candidate expects to be graduated, and the candidate is not eligible for final examination until the dissertation has been approved.

The dissertation shall be read by a reading committee, chaired by the major professor, and appointed by the Dean of the Graduate School upon the advice of the head of the major department. This committee shall consist of not fewer than three members, and must include one representative of an allied department. The dissertation must be approved by the committee and the head of the major department.

One unbound copy of the dissertation, signed by dissertation committee, must be deposited with the Office of the Graduate School before graduation. Graduate students completing a dissertation in a Ph.D. program offered through the Speed Scientific School are required to submit additional copies. Students should contact the dean of that school for specific information.

Standards for the Preparation of Thesis and Dissertations is available on the Graduate School web site. Alternate standards must be approved if in conflict with this standard.

Final Oral Examination

This examination is to be a defense of the dissertation and a demonstration of the candidate's mastery of his/her field. The examination will be given by a committee of Graduate Faculty members appointed by the Dean of the Graduate School upon recommendation of the head of the major department. The Committee will consist of five or more members representing the major department and at least one allied department. The major professor shall be chair and must be a Senior Member of the Graduate Faculty. The remaining Committee members must be Members of the Graduate Faculty.

The Graduate Dean's Office shall notify all members of the Graduate Faculty at least one week in advance that they are invited to participate in the examination, but only members of the committee may vote. At the discretion of the major department, a portion of the examination may be written.

The examination must be taken at least fourteen days before the end of the semester in which the degree is to be granted. To be passed in this examination, the student may not receive more than one abstention or dissenting vote.

Requirements for the Master's Degree

The departmental announcements in this catalogue should be consulted in all instances; however, the following rules apply to all master's degree programs.

Course Credit

A minimum total of 30 semester hours of graduate credit is required for the master's degree. At least 15 semester hours must be in courses of the major subject area, and the remaining hours in the program distributed as recommended and approved by the major department. At least one-half of the credits counted toward the degree (exclusive of thesis, practicum and internships) must be in courses open to graduate students only (600 level or above). A grade average of 3.0 or better must be maintained.

There is a time limit imposed, stipulating that credit earned more than six years prior to the completion of the degree may not be counted toward meeting its requirements. This time period may be extended upon recommendation of the student's department head and the approval of the Dean of the Graduate School.

Maintaining Candidacy

Refer to previous section entitled, General Academic Policies and Requirements, see subsection entitled Maintaining Candidacy.

Thesis

Students completing degree programs that include a thesis must submit the thesis to their major professor at least thirty days in advance of graduation (guidelines may be found at http://graduate.louisville.edu/student_info/theses.html).

Acceptance of the thesis shall be at the discretion of a special reading committee composed of the major professor and two other persons of professorial rank recommended by the department and appointed by the Dean of the Graduate School. One person so appointed shall be from a different department, and all three must be members of the Graduate Faculty. The major professor must be a Senior Member of the Graduate Faculty. The committee shall complete its review of the thesis at least one week prior to the final oral examination.

One unbound copy of the accepted thesis, signed by the committee members, must be deposited with the Office of the Graduate School (see Schedule of Courses for due date). Graduate students completing a thesis in an M.S. program offered through the Speed Scientific School are required to submit additional copies. Students should contact the office of the dean of that school for specific information.

The thesis normally carries 6 semester hours of graduate credit, which is in addition to the 15-hour minimum taken within the major department. In certain departments, a professional paper may be required in lieu of a thesis. For procedures in these instances, consult the head of the department.

Final Oral Examination

The final oral examination shall be conducted by a committee of Graduate Faculty members recommended by the head of the major department and appointed by the Dean of the Graduate School in the same manner as the thesis reading committee.

The examination must cover the materials presented in the thesis or professional paper and may include the content of courses taken or other matters pertinent to the candidate's admissibility to the master's degree. At the discretion of the major department, a portion of this examination may be written. The recommendation for the degree shall be determined by a simple majority of the committee members.

Recommendation shall be made to the graduate dean at least one week prior to graduation.

In the event of an unfavorable vote, the committee may refuse the candidate's admissibility to the master's degree, or it may recommend another examination with or without additional work.

Application for Degree and Graduate Student Honors

Application for Degree

Degrees are awarded in August, December, and May. Candidates who expect to receive degrees on a particular award date must complete the application for degree on ULink before the deadline specified in the University calendar (see Schedule of Courses).

The University holds two commencement ceremonies each year. For specific information regarding the ceremonies, apparel, dates, etc. please visit the Commencement web-site: <http://www.louisville.edu/commencement/>

Each student who is required to submit a dissertation or thesis to fulfill degree requirements must follow the guidelines

approved by the Graduate School. These guidelines *The Preparation of a Dissertation and The Preparation of a Thesis* may be found on the Graduate School web-site http://graduate.louisville.edu/student_info/theses.html. Prior to submission of the final copy of a dissertation/thesis, students must contact the Graduate School to schedule a review of the document.

Microfilming and Copyrighting

The University of Louisville, by action of its graduate faculty, requires that all theses and dissertations be microfilmed. Copyrighting the paper is an optional choice for its author. Candidates for advanced degrees that require theses or dissertations must submit agreements for microfilming and copyright applications on the appropriate forms supplied by the Graduate School Office. A completed application, one extra copy of the abstract, and one extra copy of the title page must accompany the unbound copies of each dissertation or thesis. The extra copies of the abstract and title page are used by UMI/Proquest. in its abstracting journals. A limitation of 350 words is set on the abstracts for doctoral dissertations and 150 words for theses for master's degrees.

Graduate School Honors

Graduate Dean's Citation

Graduate Dean's Citations are awarded at each commencement to students recommended by their departments in recognition of superior accomplishment (e.g., publications, professional service) in their graduate studies beyond the achievement of a high grade point average. Each school or college may recommend up to 10 percent of its graduate students completing their degrees in August, December, and May of the academic year. Recommendations are to be based on the student's achievements both in their area of scholarship and outside the classroom.

Alice Eaves Barns Award

This award is named in honor of Mrs. Alice Eaves Barns for her many years of outstanding service as a staff member of the Graduate School at the University of Louisville. This award recognizes a student who has displayed tenacity in the face of adversity, while attaining excellence in both the classroom and outside endeavors. The Award is given in recognition of outstanding achievement in a Master's Program. Nominations may be submitted to the Graduate Dean for the May and December convocations.

Guy Stevenson Award

The Guy Stevenson Award for Excellence in Graduate Studies honors a former dean of the Graduate School. The Stevenson Award is presented to a doctoral degree recipient who excels in scholarship, leadership, and other areas within their discipline. The recipient of this award must attend commencement

as they will carry the graduate school banner, leading all doctoral students in the processional. This student will be a candidate for student commencement speaker.

John Richard Binford Memorial Award

The John Richard Binford Memorial Award honors a former chairman of the Department of Psychology. Doctoral nominees for this award will be assessed in the same manner as those students considered for the Stevenson award. The recipient of this award is not required to attend commencement.

John M. Houchens Prize

The John M. Houchens Prize honors a former Registrar of the University. In the spring and fall of each year doctoral dissertations are submitted for consideration. If one is considered to be of special merit, a committee may recommend that its author be awarded the Houchens Prize.

Nominations for these awards are submitted to the Graduate Dean for December and May commencement recognition. Those individuals who received their degrees in August must be nominated for consideration during the December Commencement program.

Dissertations to be considered for the Houchens Prize are submitted by the same route. Only those students expected to complete their doctoral degree by the end of the current term (or August in the case of December consideration) are eligible for consideration of this award.

Graduate School Academic Grievance Procedure

The Graduate School follows the procedures for academic grievance as published in the University governance document, The Redbook, Chapter 6, Article 8. This policy is stated below. Any student considering filing such a grievance is advised to consult with the Graduate School Student Advocate for advice and information. The Graduate School Academic Grievance Committee is the committee of original jurisdiction for issues involving graduate students enrolled for graduate credit.

Section 1: Introduction

This procedure is designed to provide fair means of dealing with student complaints regarding a specific action or decision made by the faculty or a faculty member. "Students who believe they have been treated unfairly, discriminated against, or have had their rights abridged may initiate a grievance" (The Redbook, Section 6.8.1).

The Graduate School Academic Grievance Committee has the power to hear all grievances of graduate students involving academic matters other than substantive grade appeals. "Academic matters are defined as those concerning instructional activities, research activities, activities closely related to either of these functions, or decisions involving instruction or affecting academic freedom" (The Redbook, Section 6.8.3). Because the "authority for the determination of grades in any course shall rest with the faculty of the academic unit offering the course" (The Redbook, Section 6.6.2), appeals over individual grades must be made to the faculty member, department chair, and/or dean of the academic department in which the course is offered. Grievance over grades can only be filed by students who "believe they have been treated unfairly, discriminated against, or have had their rights abridged" after they have used the academic unit's appeals procedures. The Graduate School Academic Grievance Committee may review allegations that a course grade has resulted from an unfair procedure. However, the committee should not substitute its judgment on the merits of such allegations regarding unfairness or discrimination as an evaluation of academic performance in the course.

All grievances should be pursued, if possible (assuming procedures are available), in the Academic Department or Unit where the student's program is housed before approaching the Graduate School Academic Grievance Committee.

To assist the student, a Student Grievance Officer is provided, who is responsible for "informing students of their rights and obligations under the grievance procedure and especially the deadlines that have been established. The Student Grievance Officer shall seek to resolve informally as many grievances as possible" (The Redbook, Section 6.8.2). Students are encouraged to seek the assistance of the Student Grievance Officer at any stage of the grievance process.

The procedures established for the Graduate School Academic Grievance Committee are described below.

Section 2: Preliminary Steps

To pursue a grievance concerning academic matters within the academic unit, the following steps of the grievance procedure should be observed:

- The student should first discuss the matter with the person(s) directly involved and attempt to resolve the grievance through informal discussion.
- If there is no resolution, the student should discuss the matter with that person's supervisor or the person to whom such person reports (e.g., department chair and/or dean), who should attempt to mediate a resolution.
- If the student has not been able to obtain a resolution, he or she may request the Student Grievance Officer (S.G.O.) to attempt informal mediation of the problem.
- If the matter has not been satisfactorily resolved through the informal process, the student shall submit a written statement of the grievance to the Graduate School Academic Grievance Committee through the Office of the Dean of the Graduate School.

The statement shall contain:

- A brief narrative of the condition giving rise to the grievance;
- designation of the parties involved; and
- statement of the remedy requested.

Section 3: Committee Action

- Upon receipt of the written statement, the Graduate School Academic Grievance Committee, or its representatives, shall:
- Contact the student and the Student Grievance Officer to obtain assurance that all steps of the above informal process were completed and that those issues in the statement were discussed at all levels.
- Notify the parties named in the statement of the grievance naming them; and send a copy of the statement to the named parties and to all committee members.
- Notify the grievant and the respondent(s) of the right to challenge committee members for cause, and request early notification of challenge(s) to expedite the grievance procedure. Challenges or notification that no challenges will be made must be received from the grievant in order for the grievance process to go forward. Challenges from respondents must be received no more than ten (10) working days after the right to challenge notification(s) is mailed. Included in this notification will be a list of the names of all current, regular grievance committee members. The Graduate School Student Advocate, in consultation with the Chair of the Graduate School Academic Grievance Committee, will determine if sufficient cause is represented in any challenge to exclude a Committee member from participating in the grievance process.
- Meet within twenty (20) working days after receiving both the written statement of any grievance and the grievant's response to the right to challenge committee members and recommend to the Dean of the Graduate School whether sufficient grounds exist to accept a case for hearing. If the Committee recommends against holding a hearing and the Dean concurs, the grievance process is ended. If the Committee recommends against holding a hearing and the Dean does not concur, the Dean can instruct the Committee to hold a hearing. If the Committee recommends that a hearing be held, the Committee shall hear the case. The Committee shall notify, in writing, all persons directly involved as to the reasons for its recommendation. If a grievance statement is received less than fifteen (15) working days before the end of the spring semester and the grievance committee is unable to convene a meeting due to the absence of some of its members from campus during the summer term, the Grievance Committee will meet within ten (10) working days after the beginning of the fall semester.
- If a hearing will be held, notify in writing all the parties involved, including any witnesses, of the date, time and place of the hearing at least ten (10) days prior to the hearing date (which shall be within thirty (30) working days of receipt of the written grievance).

- Request in writing from all parties involved any pertinent material deemed necessary for review by the committee prior to the hearing. These materials, and any additional materials either party chooses to submit, must be submitted to the committee not later than four days prior to the hearing. Any person named in a grievance may submit a written statement to the committee outlining issues from that person's perspective.
- Maintain confidentiality throughout the entire grievance process.

The action of the grievance committee as to whether to grant a hearing when accepted by the Dean of the Graduate School shall be final and binding on all parties except when subject to the condition of appeal, as described in Sections 6 and 7.

All communications among the committee, the grievant(s), and the person(s) named in the statement of grievance will be confidential.

Section 4: Hearing Process

All hearings conducted by the Graduate School Academic Grievance Committee shall be conducted confidentially in the following manner:

- The grievant(s) and the respondent(s) must be present during the information-gathering portion of the hearing. Witnesses will be available and will be called when needed. The committee reserves the right to allow the presence of a secretary or a technical assistant.
- All statements during the information-exchange phase of the hearing will be tape-recorded. This record will be preserved in the University Archives for a minimum of five years and shall be confidential.
- Any committee member may question any of the participants at the hearing.
- The grievant will present his or her statements and/or witnesses to the committee.
- The respondent will have the opportunity to question the grievant(s) and the witnesses about their statements.
- The respondent will present his or her statements and/or witnesses to the committee.
- The grievant will have the opportunity to question the respondent(s) about their statements.
- After all information is exchanged, all persons except the committee members and the recording secretary will leave the committee room. The grievant(s), the respondent(s), and the witnesses will continue to be available to the committee should further information be needed.
- The Committee will meet in closed session to decide upon its recommendation(s) to the Dean of the Graduate School.
- The committee shall submit its report with recommendation(s) and reasons for the recommendation(s), to the grievant(s), the respondent(s), and the Dean of the Graduate School. If the grievance directly involves the Dean, the report and recommendation(s) of the Graduate School Academic Grievance Committee shall be referred for decision to the University Provost.

- The student's grievance will not be included as part of the student's record, unless it results in a change in student status or the student voluntarily inserts the information.
- Until the grievance is resolved, the student may continue the natural academic progression through the academic unit, subject to the requirements of Article 6.6, "Academic Review, Advancement, Probation, and Dismissal of Students," and Article 6.7, "Nonacademic Disciplinary Procedures," of The Redbook.

Section 5: Decision

The Dean of the Graduate School (or the Provost in cases where the Graduate Dean is directly involved in the grievance) shall approve or reject the committee's recommendation(s) within twenty-eight (28) days after receiving it (them). If the decision of the Dean or Provost is not in accord with the committee's recommendation(s), the Dean or Provost shall state the reasons for that decision, in writing, to all persons directly involved in the grievance and to the committee. The Dean or Provost shall then take appropriate action to implement his or her decision after the time for appeal has elapsed.

Section 6: Rehearing

A grievance committee, within twenty-one (21) days after delivery of its report, may be petitioned to reconsider its decision upon the basis of evidence of misrepresentation of materials, facts, or upon the basis of newly discovered evidence clearly not available at the original hearing.

Section 7: Appeal

Any party to the grievance may appeal to the University Student Grievance Committee within twenty-one (21) days from the date of the final decision of the Dean of the Graduate School or Provost if the Dean's or Provost's decision does not concur with the recommendation of the grievance committee.

Revised by the Graduate Council, June 24, 2003

University Policies and Procedures

Student Grievance Officer

The University of Louisville Student Grievance Officer is a tenured faculty member who is responsible for informing students of their rights and obligations under the University Student Grievance procedure and especially the deadlines that have been established.

The Grievance Officer will assist the student in efforts to achieve informal resolution in as many academic or non-academic complaints possible.

One of the main goals of the Student Grievance Officer is to establish an understanding among students, faculty, staff and administration when there is conflict.

Problems pertaining to grades, financial aid, University parking, housing, food services, registration, etc., may all be discussed with the Student Grievance Officer as a means of seeking direction for the pursuit of a resolution. Any aspect of the University that creates a problem for students is a matter of concern for the Student Grievance Officer.

This service is available to all students. Voice mail is available (852-6102) but e-mail (joe.Steffen@louisville.edu) is the preferred method of contact.

Code of Student Conduct

The Code of Student Conduct is the University's policy regarding nonacademic misconduct and discipline of students. The primary purpose for the imposition of non-academic discipline in the University campus setting is to preserve and protect a quality educational environment. The Code of Student Conduct is published in the Student Handbook and is also available on the worldwide web at <http://www.louisville.edu/student/life/code.htm> and through the Student Life Office, Student Activities Center, Room W302. If you have any questions or would like information pertaining to reporting an alleged incident of non-academic misconduct, please contact the Associate Director of Student Life at 852-5787.

Code of Student Rights and Responsibilities

Section 1. Purpose

The Code of Student Rights and Responsibilities is set forth in writing in order to give students general notice of their rights and responsibilities at the University of Louisville. Further rights and responsibilities are set forth in other University rules and policies, including the Code of Student Conduct, Residence Hall contracts, and academic unit bulletins. It is the students' responsibility to be aware of all University rules and policies; students should check with the office of the Assistant Vice President for Student Life and with their academic units if they have any questions about the purposes or intent of these policies.

The University is a public educational institution for adults rather than a custodial institution. Consistent with the role of the University to educate its students and to stimulate student autonomy and independence, University regulation and supervision of student life on and off campus is limited. The University does not assume responsibility or liability for the conduct of its students; responsibility and liability for student conduct rests with the student as inherent attributes of his or her adult status, concurrently with the student's freedom of choice regarding his or her presence at the University and his or her own conduct and associations.

Section 2. Definitions

When used in this Code:

1. The term "academic dishonesty" means obtaining or seeking to obtain an unfair academic advantage for oneself or for any other student; it includes lying, cheating, stealing, or engaging in otherwise dishonest conduct in the course of or related to any academic exercise.
2. The term "academic exercise" means a test, quiz, examination, speech, presentation, paper, field or laboratory work, or any other academic activity on which a student is evaluated.
3. The term "group" means a number of persons who are associated with each other and who have not complied with the University requirements for recognition as an organization.
4. The term "organization" means a number of persons who are associated with each other and who have complied with the University requirements for recognition.
5. The term "student" means any person taking courses at the University, either full time or part time, pursuing undergraduate, graduate or extension studies on a regular quarter, semester, or summer-term basis.
6. The term "student broadcast" means oral material published on a student operated radio or television station.
7. The term "student press" means either a student publication or a student broadcast.
8. The term "student publication" means written material published by a student organization.
9. The term "teacher" means any person hired by the University to conduct classroom activities. In certain situations, a person may be both "student" and "teacher." Determination of the person's status in a particular situation shall be determined by the surrounding circumstances.
10. The term "University" means the University of Louisville and, collectively, those responsible for its control and operation.

Section 3. Admission and Financial Aid

All applicants for admission and financial aid to the University shall be considered without regard for race, color, national origin, religion, sex, handicap not affecting qualification, or political beliefs.

Section 4. Classroom Rights and Responsibilities.

1. A student shall be evaluated on demonstrated knowledge and academic performance, and not on the basis of personal or political beliefs or on the basis of race, color, national origin, religion, sex, age, or handicap not affecting academic performance.
2. A student has freedom of inquiry, of legitimate classroom discussion, and of free expression of his or her opinion, subject

to the teacher's responsibilities to maintain order and to complete the course requirements.

3. A student is responsible for fulfilling the stated requirements of all courses in which he or she is enrolled.

4. A student has the right:

a. To be informed in reasonable detail at the first or second class meeting about the nature of the course and to expect the course to correspond generally to its description in the appropriate University catalogue or bulletin;

b. to be informed in writing and in reasonable detail at the first or second class meeting of course requirements and assignments;

c. to be informed in writing and in reasonable detail at the first or second class meeting of standards and methods used in evaluating the student's academic performance;

d. to be informed in writing of any necessary changes in assignments, requirements, or methods of grading during the semester with the reasons for such changes.

5. A student has the right to confidentiality in the student/teacher relationship regarding the student's personal or political beliefs. Disclosures of a student's personal or political beliefs, expressed in writing or in private conversation, shall not be made public without explicit permission of the student.

Charges of violations of these classroom rights and responsibilities shall be handled through the appropriate academic unit level procedures.

Section 5. Academic Dishonesty

Academic dishonesty is prohibited at the University of Louisville and all of its programs. It is a serious offense because it diminishes the quality of scholarship, makes accurate evaluation of student progress impossible, and defrauds those in society who must ultimately depend upon the knowledge and integrity of the institution and its students and faculty.

Academic dishonesty includes, but is not limited to, the following:

1. Cheating:

a. Using or attempting to use books, notes, study aids, calculators, or any other documents, devices, or information in any academic exercise without prior authorization by the teacher.

b. Copying or attempting to copy from another person's paper, report, laboratory work, computer program, or other work material in any academic exercise.

c. Procuring or using tests or examinations, or any other information regarding the content of a test or examination, before the scheduled exercise without prior authorization by the teacher.

d. Unauthorized communication during any academic exercise.

e. Discussing the contents of tests or examinations with students who have not yet taken the tests or examinations if the instructor has forbidden such discussion.

f. Sending a substitute to take one's examination, test, or quiz, or to perform one's field or laboratory work; acting as a substitute for another student at any examination, test, or quiz, or at a field or laboratory work assignment.

g. Conducting research or preparing work for another student, or allowing others to conduct one's research or prepare one's work, without prior authorization by the teacher.

Except when otherwise explicitly stated by the teacher, examination questions shall become public after they have been given.

2. Fabrication: Inventing or making up data, research results, information, or procedures, such as:

a. Inventing or making up data, research results, information, or procedures.

b. Inventing a record of any portion thereof regarding internship, clinical, or practicum experience.

3. Falsification: Altering or falsifying information, such as:

a. Changing grade reports or other academic records.

b. Altering the record of experimental procedures, data, or results.

c. Altering the record of or reporting false information about internship, clinical, or practicum experiences.

d. Forging someone's signature or identification on an academic record.

e. Altering a returned examination paper in order to claim that the examination was graded erroneously.

f. Falsely citing a source of information.

4. Multiple Submission: The submission of substantial portions of the same academic work, including oral reports, for credit more than once without prior authorization by the teacher involved.

5. Plagiarism: Representing the words or ideas of someone else as one's own in any academic exercise, such as:

a. Submitting as one's own a paper written by another person or by a commercial "ghost writing" service.

b. Exactly reproducing someone else's words without identifying the words with quotation marks or by appropriate indentation, or without properly citing the quotation in a footnote or reference.

c. Paraphrasing or summarizing someone else's work without acknowledging the source with a footnote or reference.

d. Using facts, data, graphs, charts, or other information without acknowledging the source with a footnote or reference. Borrowed facts or information obtained in one's research or reading must be acknowledged unless they are "common knowledge". Clear examples of "common knowledge" include the names of leaders of prominent nations, basic scientific laws, and the meaning of fundamental concepts and principles in a discipline. The specific audience for which a paper is written may determine what can be viewed as "common knowledge": for example, the facts commonly known by a group of chemists will differ radically from those known by a more general audience. Students should check with their teachers regarding what can be viewed as "common knowledge" within a specific field or assignment, but often the student will have to make the final judgment. When in doubt, footnotes or references should be used.

6. Complicity in Academic Dishonesty: Helping or attempting to commit an academically dishonest act. The academic units may have additional guidelines regarding academic dishonesty. It is the student's responsibility to check with their teachers and academic units to obtain those guidelines.

Section 6. Discipline Procedures for Academic Dishonesty

Charges of academic dishonesty shall be handled through the appropriate academic unit level procedures.

An academic unit that determines that a student is guilty of academic dishonesty may impose any academic punishment on the student that it sees fit, including suspension or expulsion from the academic unit. A student has no right to appeal the final decision of an academic unit. However, a student who believes that he or she has been treated unfairly, has been discriminated against, or has had his or her rights abridged by the academic unit may file a grievance with the Unit Academic Grievance Committee, pursuant to the provisions of the Student Academic Grievance Procedure; the Unit Academic Grievance Committee may not substitute its judgment on the merits for the judgment of the academic unit.

An academic unit that suspends or expels a student from the academic unit because the student has been found guilty of academic dishonesty may recommend to the University Provost in writing that the student also be suspended or expelled from all other programs and academic units of the University. Within four weeks of receiving such a recommendation, the Provost shall issue a written decision. Neither the student nor the academic unit shall have the right to appeal the Provost's decision. However, a student who believes that he or she has been treated unfairly, has been discriminated against, or has had his or her rights abridged by the issuance of a decision by the Provost may file a grievance with the University Student Grievance Committee, pursuant to the provisions of the Student Academic Grievance Procedure; the University Student Academic Grievance Committee may not substitute its judgment on the merits for the judgment of the Provost.

Section 7. Campus Expression

1. Students have the right of freedom of expression to the extent allowed by law.
2. Students may picket or demonstrate for a cause, subject to the following conditions:
 - a. The students must act in an orderly and peaceful manner.
 - b. The students must not in any way interfere with the proper functioning of the University.
 - c. Where students demonstrate in an area not traditionally used as an open public forum, the University reserves the right to make reasonable restrictions as to time, place, and manner of the student demonstrations.
3. Students may distribute written material on campus without prior approval, providing such distribution does not disrupt the operations of the University or violate University rules.
4. Students may invite to campus and hear on campus speakers of their choice on subjects of their choice; approval will not be withheld by any University official for the purpose of censorship.

Section 8. The Student Press

1. The student press is free to deal openly, fearlessly, and responsibly with issues of interest and importance to the academic community. There shall be no prior approval of student press content by the University.
2. The student press is responsible for adhering to the canons of responsible journalism and for complying with the law. Student publications and broadcasts shall not publish libelous or slanderous matter, or any other content that violates the law.
3. All student publications and broadcasts shall explicitly state that the opinions expressed are not necessarily those of the University or its student body.
4. Students may not be disciplined by the University for their participation with the student press except for violations of University rules that are not inconsistent with the guarantees contained herein.

Section 9. University Facilities

Appropriate University facilities shall be available to organizations within the University community for regular business meetings, for social programs, and for programs open to the public.

1. Reasonable conditions may be imposed to regulate the timeliness of requests, to determine the appropriateness of the space assigned, to regulate time and use, and to insure proper maintenance.
2. Preference may be given to programs designed for audiences consisting primarily of members of the University community.

3. Allocation of space shall be made based on priority of requests and the demonstrated needs of the organization.
4. Charges may be imposed for any unusual costs for use of facilities.
5. Physical abuse of assigned facilities may result in reasonable limitations on future allocation of space to offending parties and will require restitution of damages.
6. The organization requesting space must inform the University of the general purpose of any meeting open to persons other than members and the names of outside speakers.

Section 10. Use of University Name and Insignia

No individual, group, or organization may use the University name or insignia without the express authorization of the University except to identify the University affiliation. University approval or disapproval of any policy or issue may not be stated or implied by any individual, group, or organization.

Section 11. Campus Residence Facilities

Students have the right of privacy in campus residence facilities.

1. Nothing in the University relationship or residence hall contract may expressly or impliedly give the institution or residence hall officials authority to consent to search of a student's room or residence by police or other law enforcement officials unless they have obtained a search warrant.
2. The University reserves the right to enter a student's room in a residence hall or a student's apartment in a campus residence:
 - a. in emergencies where imminent danger to life, safety, health, or property is reasonably feared;
 - b. to make necessary repairs, improvements, or alterations in the facility;
 - c. to provide necessary pest control services;
 - d. to inspect the facility as deemed necessary by the University.

Section 12. Student Records

The privacy and confidentiality of all student records shall be preserved in accordance with applicable laws. The University shall establish and adhere to a clear and definitive records policy.

Section 13. Campus Organizations

Organizations and groups may be established within the University for any legal purpose. Affiliation with an extramural organization shall not, in itself, disqualify the University branch or chapter from University privileges. A group shall become a formally recognized organization through procedures established by the Student Government Association, upon approval of the Vice President for Student Affairs.

cedures established by the Student Government Association, upon approval of the Vice President for Student Affairs.

1. Groups of a continuing nature must institute proceedings for formal recognition if they are to receive benefits from the University.
2. Recognition of an organization by the University infers neither approval nor disapproval of the aims, objectives, and policies of the organization, nor liability for the actions of the organization.
3. Membership in all University-related organizations shall be open to any member of the University community who is willing to subscribe to the stated aims and meet the stated obligations of the organization, provided such aims and obligations are lawful.
4. Membership lists are confidential and solely for the use of the organization, except that names and addresses of current organization officers shall be reported to the University as a condition of continuing University recognition.
5. Any organization that engages in activities either on or off campus that are illegal or contrary to any University policy may have sanctions imposed against it, including withdrawal of University recognition.

Section 14. Promulgation of University Rules Affecting Students

Rules and Policies affecting students shall be published in the Student Handbook, in the appropriate University catalogues, or in any other appropriate publication prior to their enforcement. Included in the Student Handbook are the following: Academic Grievance Procedure, Code of Student Conduct, Code of Student Rights and Responsibilities, Policy on Consumption of Alcoholic Beverages for Recognized Student Organizations, Hazing and Initiation Activities Policy, Non-academic Grievance Policy and the Sexual Harassment Policy. Copies of the Student Handbook are available from the Office of Student Life.

Privacy of Student Records

The University of Louisville hereby notifies students concerning the Family Educational Rights and Privacy Act of 1974 (FERPA). This Act, with which the institution intends to comply fully, was designed to protect the privacy of educational records, to establish the right of students to inspect and review their education records, and to provide guidelines for the correction of inaccurate or misleading information. Students also have the right to file complaints with the Family Educational Rights and Privacy Act Office, Department of Education, concerning alleged failures by the institution to comply with the Act.

The University has adopted a policy which explains in detail the procedures to be used by the University for compliance with the provisions of the Act and the regulations adopted pursuant thereto. Copies of the policy can be obtained from the University Archives and Records Center, Ekstrom Library.

Questions concerning the Family Educational Rights and Privacy Act may be referred to the Director, University Archives and Records Center or visit the Website at: <http://library.louisville.edu/uarc/stupriv.htm>.

Drug-Free Schools and Communities Act Amendments of 1989

On December 12, 1989, President Bush signed into law the Drug-Free Schools and Communities Act Amendments of 1989. These Amendments require that higher education institutions receiving any federal funding must notify each student and employee annually of its program to prevent the illicit use of drugs and the abuse of alcohol by students and employees.

We at the University of Louisville have begun programs in the past few years to combat the misuse and abuse of alcohol and other chemical substances. We realize; however, that only through a concerted effort by all, can we make any major strides in preventing substance abuse. The following is the University of Louisville's Drug-Free Schools Notice:

Drug-Free Schools Notice

As required by the Federal Drug-Free Schools and Communities Act Amendments of 1989, you are hereby notified by the University of Louisville that on University premises or at University-sponsored activities the following acts are prohibited:

1. distribution, possession, or use of any illegal drug or controlled substance without legal authorization;
2. providing alcoholic beverages to individuals under 21 years of age, or possession of alcoholic beverages by individuals under 21 years of age; or
3. illegal possession of an open container of an alcoholic beverage, public intoxication, driving while intoxicated, and drinking alcoholic beverages in an unlicensed public place.

In addition to imposition of disciplinary sanctions under University procedures including suspension or separation from the University for such acts, students or employees may face prosecution and imprisonment under Federal and Kentucky laws which make such acts felony and misdemeanor crimes.

The Code of Student Conduct lists details of offenses and disciplines for students. Staff may be disciplined under Section 11.1 of the Staff Handbook. Faculty may be disciplined by Deans per Redbook Sections 4.5.3 or 3.2.2 with review per 4.4 for sanctions less than dismissal or suspension for one year.

The health risks associated with the misuse and abuse of mind-altering drugs, including controlled substances and alcohol, include but are not limited to: physical and psychological dependence; damage to the brain, pancreas, kidneys and lungs; high blood pressure, heart attacks, and strokes; ulcers; birth defects; a diminished immune system; and, death.

The Counseling Center and Student Health Services provide assessment and referral services to University students, as well

as serving as an alcohol and other drug information/education resource. For further information, call 852-6585. Service for faculty and staff are available through the Faculty/Staff Assistance Program. For further information call 852- 6543.

Americans with Disabilities Act

ADA Policy Statement University of Louisville

The University of Louisville is committed to providing equal opportunity for persons with disabilities in full compliance with the Americans with Disabilities Act of 1990 (ADA), and Section 504 of the Rehabilitation Act of 1973 (504). The University's 504/ADA Coordinator is responsible for all campus activities relevant to Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. The University Affirmative Action Officer will monitor compliance and assist all unit heads in meeting their equal opportunity obligations. The University Disability Resource Center staff will assist the university community in fulfilling its responsibility by serving as an information resource center and coordinating support services for students with disabilities.

ADA and 504 Grievance Procedures University of Louisville

The following grievance procedure is being recommended to provide prompt and equitable resolution of complaints concerning ADA and Section 504 of the Rehabilitation Act of 1973.

The University of Louisville ADA Grievance Procedure is an internal grievance procedure providing for prompt and equitable resolution of complaints alleging any action prohibited by the U.S. Department of Justice regulations implementing Title II of the Americans with Disabilities Act. Title II states, in part, that "no otherwise qualified individual with a disability shall, solely by reason of such disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination" in programs or activities sponsored by an agency.

General information regarding ADA or 504 can be addressed to:

Director
Disability Resource Center
Robbins Hall Room 101
852-6938

Complaints should be addressed to the person who has been designated to coordinate ADA compliance efforts:

Director
Affirmative Action Office
Personnel Services Building
852-6538

1. A complaint should be filed in writing, contain the name and address of the person filing it, and briefly describe the alleged violation. Upon receipt of the written notice of com-

plaint, the Director of Affirmative Action/Employee Relations or his/her designee shall acknowledge receipt within five workdays.

2. A complaint should be filed within 180 days after the complainant becomes aware of the alleged violation.

3. An investigation, as may be appropriate, shall follow a filing of complaint. The investigation shall be conducted by the Affirmative Action Office. This internal Complaint procedure contemplates an informal but thorough investigation, affording all interested persons and their representatives, if any, an opportunity to submit evidence relevant to a complaint.

4. A written determination regarding the investigation of the complaint and a description of the resolution, if any, shall be issued by the Affirmative Action Office and a copy forwarded to the complainant no later than 60 days after its filing.

5. The Affirmative Action Office shall maintain the files and records relating to the complaints filed.

6. The complainants may request a reconsideration of the case in instances where he or she is dissatisfied with the resolution. The request for reconsideration should be made within 15 work days after receipt of the determination to the Affirmative Action Office.

7. The right of a person to a prompt and equitable resolution of the complaint filed hereunder shall not be impaired by the person's pursuit of other remedies such as the filing of an ADA complaint with the responsible federal department or agency. Use of this grievance procedure is not a prerequisite to the pursuit of other remedies.

8. These rules shall be construed to protect the substantive rights of interested persons to meet appropriate due process standards, and to assure that the University complies with the ADA and implementing regulations.

Special Facilities and Services

University Libraries

The University offers an extensive library system designed to support undergraduate and graduate teaching, learning and research. The Library system consists of the Main Library, the Fine Arts Library, the Law Library, the Music Library, the Health Sciences Library, the Engineering, Physical Science, and Technology Library and the University Archives and Records Center. Total library holdings number approximately two million volumes.

The libraries subscribe to 24,872 journals and to over 30 electronic databases, with electronic access to more than 30,000 journals. In addition, the libraries hold over 2 million items in microform.

The University Libraries provide access to electronic resources and databases covering a wide spectrum of subjects for faculty, staff and students. The Interlibrary Loan units of the Ekstrom and Health Sciences libraries provide access to the collections of the Kentuckiana Metroversity member schools, the Kentucky Commonwealth Virtual Library (KCVL), and other libraries throughout the state, nation and the world for materials not owned by the University of Louisville Libraries. The libraries' collections are accessed through the Minerva online catalogue at: <http://library.louisville.edu/>

For more extensive information regarding The University of Louisville Libraries visit their web-site:

<http://www.louisville.edu/library/>

University Archives and Records Center

The University Archives is a research repository of national significance. It contains primary sources relating to the university, Louisville, and the nation. It attracts students, faculty, and scholars from Louisville, from elsewhere in the U.S., and from other countries. It collects, preserves, and makes available for research historical manuscripts, oral history interviews, and other primary research materials, and thus serves as a research laboratory for humanists, social scientists, and others. Its collections include nineteenth and twentieth century records of area businesses, cultural organizations, social service agencies, and churches; personal papers of politicians, scholars, members of the Jewish and African-American communities, women, and other prominent and representative Louisvillians; and publications, papers, and photographs documenting the history of the university. Students with class projects, theses, or dissertations requiring primary sources are invited to consult this office. Additional information can be found at: <http://library.louisville.edu/uarc>.

Information Technology Services

U of L's Information Technology unit (IT) is responsible for planning, implementation, deployment, and management of information technology services in support of the instructional, research, administrative, and service programs of the University.

For more information regarding the many services offered by Information Technology, please visit their web-site:

<http://www.louisville.edu/it/>

International Center

The International Center is the university-wide clearing house of information and resources for UofL faculty, students, and researchers involved in academic exchanges, overseas "live

and learn" opportunities, and academic research. The International Center promotes energetically the internationalization efforts of the University. It provides advice and counsel to UofL faculty, students, and researchers traveling abroad and assistance to international students, faculty, and researchers coming to UofL for study or work.

E-mail: intcent@louisville.edu
<http://www.louisville.edu/provost/intcent/>

Residence Facilities

For complete information regarding accommodations and for application forms inquiries should be addressed to the Residence Administration, Belknap Campus, University of Louisville, Louisville, KY 40292.

<http://www.louisville.edu/student/housing/>

Student Health and Insurance

The University of Louisville offers a Comprehensive Medical Plan to meet student health care needs. This Comprehensive plan is a major medical and hospitalization plan which has coverage for both inpatient and outpatient services. Similar to an HMO, the Health Services Office serves as the primary care provider and a referral is necessary for most services rendered outside of the Student Health Services. Purchase of the Comprehensive Plan provides coverage for physician visits at the Health Services Office (HSO) which has two clinical locations.

To be eligible for coverage under the Comprehensive Plan, students must be one of the following:

1. an undergraduate student taking 6 or more credit hours
2. a graduate student taking 3 or more hours or degree candidate,
3. GTA, GTS and GRA students receiving a stipend check from the University receive the Comprehensive Plan coverage as a benefit of their employment. If you believe you are eligible for this benefit please check with your department to verify coverage.

Dependents of insured students are eligible for the Comprehensive Medical benefits for an additional premium. Insured spouses are eligible for coverage at the Health Service Office facilities. Children under the age of 18 are not eligible for the Health Services benefit and cannot be seen in the Health Services Office.

The Health Service Offices operate 12 months of the year. The Belknap Office is located on the main Campus, 2207 South Brook Street, in the Student Health & Counseling Building, between the Student Activities Center and the Post Office. The Health Sciences Center (HSC) Office is located at 550 South Jackson Street, Ambulatory Care Building (ACB) 1st Floor.

For more information and appointments, please call the Belknap Office at (502) 852-6479 or the HSC Office at (502) 852-6446. The Insurance Advocate can be reached at (502) 852-6519.

Student Services

Student Services Administration, Undergraduate Admissions, Orientation, Testing Services, Financial Aid, Registrar, Enrollment Systems, Commencement, Residency, and Student-Athlete Certification.

Student Life

Housing and Residence Life, Intramural and Recreational Sports, Student Activities, Greek Life, Recognized Student Organizations, Student Government Association, ACCESS (Adult Services), Service Learning, Swain Student Activities Center Administration, Student Disciplinary Services, Counseling Center, Career Development Center, and International Service Learning Program.

Disability Resource Center

The Disability Resource Center coordinates services and programs for students and prospective students with disabilities. Accommodations and support services are individualized, depending on the needs of each student. Services and programs are designed to assure access for qualified students with disabilities to all programs and activities of the university. Students are strongly encouraged to make early contact with the Disability Resource Center to assure adequate time to implement support services.

Financial Settlement and Financial Aid

Continuing Registration

Tuition and fees are due on, or before, the designated due date for the semester. Payment may be made by cash, check, money order, charge card (MasterCard, Visa), or financial aid credit. Payments may be made by mail, by use of the deposit box located in the front entrance of the Houchens Building, or at the Office of the Bursar.

Failure to receive a Statement of Account will not relieve the student of the responsibility for making financial settlement by the designated due date. Continuing registrations which are not financially settled by the designated due date may have their course registration cancelled and/or be assessed financial penalties. The Continuing Registration designated due dates are listed in the current Schedule of Courses and on the Bursar's web site at: <http://www.unlink.louisville.edu> (Tuition-Fees-Payment Options, Payment Options). Students may view their account via ULink. Financial statements are no longer

sent to students via mail. All account information may be found on the students ULink

Regular Registration

Students who register after Continuing Registration should be prepared to fully settle financial obligations by the last day to drop/add for the semester. Failure to fully settle financial obligations may result in course cancellation and/or financial penalties.

Senior Citizen Tuition Remission

The University offers tuition remission to individuals who are classified by Admissions as residents of Kentucky and are at least 65 years of age on, or before, the first day of classes for the semester. Special costs, such as course fees and parking, are not covered by this program and are the financial responsibility of the student. Proof of age may be shown by presenting a driver's license or other age verification document at the Office of the Bursar.

These individuals must secure permission of the Graduate School in order to enroll in graduate-level courses. Normal admission processes must be followed in order to gain admission to a degree program.

Financial Penalties

Students whose accounts are not paid by established semester deadlines may be subject to course cancellation. Students with unpaid account balances will be placed on Financial Hold by the Bursar's Office. Students placed on Financial Hold become ineligible for further registration and transcripts will not be released until the student account is paid in full. A late payment fee of \$50.00 may be assessed when student accounts are not paid by the last day to drop/add. A student whose payment is not honored by the bank on which it was drawn may be assessed a return payment fee. If restitution is not made within 10 days of notification, the student may be subject to course cancellation and/or legal action.

Debtors who do not make satisfactory payment arrangements on their past due accounts may have their accounts placed with a collection agency. It is the policy of the University that unpaid accounts will be assessed the costs and expenses of collection, including attorney fees.

Withdrawal Policy

The effective withdrawal date is the date on which the withdrawal is processed in the Student Records System. This date is used in calculating any applicable tuition reduction.

Financial Aid Recipients

Determinations regarding refunds of resulting credit balances will be based on regulations governing the financial aid awarded to the student.

Federal regulations mandate that students have the right to cancel all or a portion of an EFT loan disbursement and have the loan proceeds returned to the lender. To request cancellation of all or a portion of your loan, contact the Financial Aid Office in writing. (Financial Aid Office, University of Louisville, Louisville KY 40292)

For additional information contact Student Financial Aid Office or review our Consumer Information online at <http://www.financialaid.louisville.edu>

Financial Settlement Options

Due dates, payment information, payment plan options, and payment plan forms for specific semesters is updated regularly on the Bursar's web site at: www.ulink.louisville.edu, Tuition-Fees-Payment Options, Payment Options. Any questions may be directed to the Bursar's Office (502-852-6503). You may also address your questions to the Bursar's Office by email and receive an email response (bursar@louisville.edu).

Financial Aid

If federal financial assistance is needed, the Free Application for Federal Student Aid (FAFSA) may be obtained on the web at www.fafsa.ed.gov, by calling the Federal Student Aid Information Center at 1-800-433-3243, or in U of L's Financial Aid Office. The formal application period for financial assistance for the following academic year is January 1 to March 15. Applications submitted after March 15 will be evaluated subject to the availability of funds. Applications and information are available from the Student Financial Aid Office, Belknap Campus, University of Louisville, Louisville, KY 40292 or visit our website <http://www.louisville.edu/student/services/fin-aid>.

Contact Information
 Student Financial Aid Office
 University of Louisville
 Louisville, KY 40292
 Website: <http://www.financialaid.louisville.edu>
 Email: fnaid@louisville.edu
 Call Center: 502-852-5511
 Fax: 502-852-0182

Satisfactory Academic Progress for Financial Aid Assessment

All students who apply for aid from the federal financial aid programs must meet the standards of the University's Satisfactory Academic Progress Policy. This policy consists of three components: GPA, FEH, and FAYE. Graduate students are not considered to be meeting the GPA requirement as long as they are allowed to continue to enroll. Financial Aid Earned Hours (FEH) is a quantitative measure to evaluate minimum financial aid earned hours during each term for which federal aid was disbursed. Graduate students who receive federal aid based on at least half time enrollment are expected to earn 4.5 hours each semester or 9 hours fall/spring and 12 if you attended the prior summer term. Financial Aid Years of Eligibility (FAYE)

is an index which establishes limitations on the cumulative length of time that a student may be enrolled in a degree program and receive consideration for federal financial aid awards. FAYE is a calculation based on the number of cumulative earned hours toward a degree in a student's career. For graduate students the limit has been set at 54 cumulative earned hours. Graduate School hours are included toward the 90 hour cumulative limit on a Specialist Degree and 108 hours on a Doctorate Degree. Once students have reached the maximum FAYE, they are no longer eligible for federal financial aid at their current degree level.

Aid Recipients Receiving All 'F' Grade

A student receiving all 'F' grades is required to comply with the federal Title IV Refund Policy as well as the University of Louisville Satisfactory Academic Progress Policy. When federal financial aid either partially or fully pays educational expenses and the student receives all 'F' grades, the Financial Aid Office is required by federal regulation to treat the student's financial aid file as an "Unofficial Withdrawal." The student can avoid this status by providing acceptable proof of attendance or participation in a class related activity beyond the midpoint of the semester. If not, then an unofficial withdrawal status is considered and the Financial Aid Office must cancel and return fifty percent of the University charges back to the Title IV programs.

Scholarships

All students are encouraged to contact their particular College or University Department for information on scholarships and/or fellowship opportunities. Please visit our Outside Scholarship webpage at <http://www.financialaid.louisville.edu> for free search websites, guides to avoid scholarship scams, and postings on outside scholarships.

Federal Perkins Loan

The Federal Perkins Loan program provides low interest loans to students who demonstrate exceptional financial need. Eligibility requirements are established by the Student Financial Aid Office, and the University becomes the student's lender. Repayment begins 9 months after a student graduates, leaves school, or drops below half-time status. Award amounts for full-time students at U of L are determined annually. The aggregate total that a graduate may borrow cannot exceed \$40,000 including any Perkins borrowed as an undergraduate.

Federal Stafford Loan Program (subsidized and unsubsidized)

Federal Stafford Loans are low-interest loans made to students by lenders such as banks, credit unions, and savings and loan companies to help students pay for the cost of postsecondary education. Any degree-seeking student attending U of L at least half-time may borrow through this program. Students may qualify for a need-based, subsidized Stafford Loan, a non-need-based, unsubsidized Stafford Loan, or a combination of

both. Need-based loans are called subsidized because the federal government pays the interest during in-school and deferment periods. Loan amounts are determined by a student's grade level, financial need, and cost of attendance. Graduate students may borrow up to \$8,500 per year in the subsidized Stafford Loan program, and up to an additional \$10,000 per year in the unsubsidized Stafford Loan program. Graduate students may not borrow more than \$138,500 (\$65,500 in the subsidized program, and \$73,000 in unsubsidized loans). The graduate debt limit includes loans received as an undergraduate. The interest rate for Stafford Loans is variable with a cap of 8.25%. The rate changes every July 1. Repayment of Stafford Loans begins six months after a student graduates, leaves school, or drops below half-time. Subsidized Stafford Loan borrowers will not have to pay any principal or interest during the six month "grace" period; unsubsidized Stafford Loan borrowers will be responsible for the interest during the deferment and grace periods. All Stafford Loans at U of L are processed electronically through Kentucky Higher Education Assistance Authority (KHEAA).

Graduate Training Assistantships

Graduate teaching, research, and service assistantships are available to qualified students in most graduate programs. These assistantships provide tuition remission, health insurance, and a stipend that is adequate to cover basic living expenses.

Applicants who are interested in being considered for assistantships, should write to the chair or graduate advisor of the department to which they are applying for admission, stating their desire to be appointed as a graduate assistant. The award of an assistantship is competitive; students who hope to be considered should present credentials that are well above the minimum required for admission.

The purpose of a graduate assistantship is to provide experience and training that augment a student's academic program. The department chair or graduate advisor will attempt to place a student in an assistantship believed to best serve the career training objective of the student. Although a student is free to make known a preference for a particular placement, the final decision is the prerogative of the department in which the student is enrolled.

The distribution of assistantships across departments may differ from year to year. Moreover, some departmental policies require that a student complete 9-18 graduate credit hours in the program before being eligible for an assistantship.

Minority Student Assistantships/Scholarships

The Graduate School is committed to providing financial support for the recruitment and retention of qualified, under represented ethnic minority students. An award candidate must be currently enrolled or have been admitted to the degree program (M.S. or Ph.D.) and be nominated by the Department Chair and Dean. These assistantships include a monthly stipend, tuition remission and health insurance.

Resigning Appointments

As a member of the Council of Graduate Schools in the United States, the University of Louisville subscribes to the Resolution Regarding Scholars, Fellows, Trainees, and Graduate Assistants:

Acceptance of an offer of financial support (such as a graduate scholarship, fellowship, traineeship, or assistantship) for the next academic year by a prospective or enrolled graduate student completes an agreement that both student and graduate school expect to honor. In that context, the conditions affecting such offers and their acceptance must be defined carefully and understood by all parties.

Students are under no obligation to respond to offers of financial support prior to April 15; earlier deadlines for acceptance of such offers violate the intent of this Resolution. In those instances in which a student accepts an offer before April 15, and subsequently desires to withdraw that acceptance, the student may submit in writing a resignation of the appointment at any time through April 15. However, an acceptance given or left in force after April 15 commits the student not to accept another appointment without first obtaining a written release from any previously accepted offer. It is further agreed by the institutions and organizations subscribing to the above Resolution that a copy of the Resolution should accompany every scholarship, fellowship, traineeship, and assistantship offer.

University Fellowships

A limited number of University fellowships may be awarded to outstanding students in the doctoral programs. These carry a generous stipend, health insurance, and full tuition remission. Nominations are made each spring to the Dean of the Graduate School by the chairs of departments granting the doctorates. Students do not directly apply to the Graduate School for these awards. Students who wish to be considered for fellowships should submit all credentials by January 15.

Residency Policy and Fees

13 KAR 2:045. Determination of residency status for admission and tuition assessment purposes.

RELATES TO: KRS Chapter 13B, 164.020, 164.030, 164A.330(6)

STATUTORY AUTHORITY: KRS 164.020(8)

NECESSITY, FUNCTION, AND CONFORMITY: KRS 164.020(8) requires the Council on Postsecondary Education to determine tuition and approve the minimum qualifications for admission to a state-supported postsecondary education

institution and authorizes the Council to set different tuition amounts for residents of Kentucky and for nonresidents. This administrative regulation establishes the procedure and guidelines for determining the residency status of a student who is seeking admission to, or who is enrolled at, a state-supported postsecondary education institution.

Section 1. Definitions

(1) "Academic term" means a division of the school year during which a course of studies is offered, and includes a semester, quarter, or single consolidated summer term as defined by the institution.

(2) "Continuous enrollment" means enrollment in a state-supported postsecondary education institution at the same degree level for consecutive terms, excluding summer term, since the beginning of the period for which continuous enrollment is claimed unless a sequence of continuous enrollment is broken due to extenuating circumstances beyond the student's control, including serious personal illness or injury, or illness or death of a parent.

(3) "Degree level" means enrollment in a course or program which could result in the award of a:

(a) Certificate, diploma or other program award at an institution;

(b) Baccalaureate degree or lower including enrollment in a course by a non-degree-seeking post baccalaureate student;

(c) Graduate degree or graduate certification other than a first-professional degree in law, medicine, dentistry or "Pharm. D"; or

(d) Professional degree in law, medicine, dentistry, or "Pharm. D".

(4) "Demonstration of Kentucky domicile and residency" means the presentation of documented information and evidence sufficient to prove by a preponderance of the evidence that a person is domiciled in Kentucky and is a resident of Kentucky.

(5) "Dependent person" means a person who cannot demonstrate financial independence from parents or persons other than a spouse and who does not meet the criteria established in Section 5 of this administrative regulation.

(6) "Determination of residency status" means the decision of a postsecondary education institution that may include a formal hearing that results in the classification of a person as a Kentucky resident or as a nonresident for admission and tuition assessment purposes.

(7) "Domicile" means a person's true, fixed, and permanent home and is the place where the person intends to remain, and to which the person expects to return if absent without intending to establish a new domicile elsewhere.

(8) "Full-time employment" means continuous employment for at least forty-eight (48) weeks at an average of at least thirty (30) hours per week.

(9) "Independent person" means a person who demonstrates financial independence from parents or persons other than a spouse and who can meet the criteria established in Section 5 of this administrative regulation.

(10) "Institution" means an entity defined in KRS 164.001(11) if the type of institution is not expressly stated and includes the Kentucky Virtual University, the Council on Postsecondary Education, and the Kentucky Higher Education Assistance Authority.

(11) "Kentucky resident" means a determination by an institution that a person is domiciled in and is a resident of Kentucky as determined by this administrative regulation.

(12) "Nonresident" means a person who is domiciled outside of Kentucky or who currently maintains legal residence outside Kentucky or who is not a Kentucky resident within the meaning of this administrative regulation.

(13) "Parent" means one (1) of the following:

(a) A person's father or mother; or

(b) A court-appointed legal guardian if:

1. The guardianship is recognized by an appropriate court within the United States;
2. There was a relinquishment of the rights of the parents; and
3. The guardianship was not established primarily to confer Kentucky residency on the person.

(14) "Preponderance of the evidence" means the greater weight of evidence, or evidence which is more credible and convincing to the mind.

(15) "Residence" means the place of abode of a person and the place where the person is physically present most of the time for a non-educational purpose in accordance with Section 3 of this administrative regulation.

(16) "Student financial aid" means all forms of payments to a student if one (1) condition of receiving the payment is the enrollment of the student at an institution.

(17) "Sustenance" means living expenses including room, board, maintenance, transportation, and also may include educational expenses including tuition, fees, books, and supplies.

Section 2. Scope

(1) State-supported postsecondary education institutions were established and are maintained by the Commonwealth of Kentucky primarily for the benefit of qualified residents of Kentucky. The substantial commitment of public resources to postsecondary education is predicated on the proposition that the state benefits significantly from the existence of an edu-

cated citizenry. As a matter of policy, access to postsecondary education shall be provided so far as feasible at reasonable cost to an individual who is domiciled in Kentucky and who is a resident of Kentucky.

(2) The Council on Postsecondary Education may require a student who is neither domiciled in nor a resident of Kentucky to meet higher admission standards and to pay a higher level of tuition than resident students.

(3) This administrative regulation applies to all student residency determinations regardless of circumstances, including residency determinations made by the state-supported institutions for prospective and currently-enrolled students; the Southern Regional Education Board contract spaces; reciprocity agreements, where appropriate; the Kentucky Virtual University; academic common market programs; the Kentucky Educational Excellence Scholarship Program; and other state student financial aid programs, as appropriate.

Section 3. Determination of Residency Status; General Rules

(1) A determination of residency shall include:

(a) An initial determination of residency status by an institution during the admission process or upon enrollment in an institution for a specific academic term or for admission into a specific academic program;

(b) A reconsideration of a determination of residency status by an institution based upon a changed circumstance; and

(c) A formal hearing conducted by an institution upon request of a student after other administrative procedures have been completed.

(2) An initial determination of residency status shall be based upon:

(a) The facts in existence when the credentials established by an institution for admission for a specific academic term have been received and during the period of review by the institution;

(b) Information derived from admissions materials;

(c) Other materials required by an institution and which are consistent with this administrative regulation; or

(d) Other information available to the institution from any source.

(3) An individual seeking a determination of Kentucky residency status shall demonstrate that status by a preponderance of the evidence.

(4) A determination of residency status shall be based upon verifiable circumstances or actions.

(5) Evidence and information cited as the basis for Kentucky domicile and residency shall accompany the application for a determination of residency status.

(6) A student classified as a nonresident shall retain that status until the student is officially reclassified by an institution.

(7) A student may apply for a review of a determination of residency status once for each academic term.

(8) If an institution has information that a student's residency status may be incorrect, the institution shall review and determine the student's correct residency status.

(9) If the Council on Postsecondary Education has information that an institution's determination of residency status for a student may be incorrect, it may require the institution to review the circumstances and report the results of that review.

(10) An institution shall impose a penalty or sanction against a student who gives incorrect or misleading information to an institutional official, including payment of nonresident tuition for each academic term for which resident tuition was assessed based on an improper determination of residency status. The penalty may also include:

(a) Student discipline by the institution through a policy written and disseminated to students; or

(b) Criminal prosecution.

Section 4. Presumptions Regarding Residency Status

(1) In making a determination of residency status, it shall be presumed that a person is a nonresident if:

(a) A person is, or seeks to be, an undergraduate student and admissions records show the student to be a graduate of an out-of-state high school within five (5) years prior to a request for a determination of residency status;

(b) A person's admissions records indicate the student's residence to be outside of Kentucky at the time of application for admission;

(c) A person moves to Kentucky primarily for the purpose of enrollment in an institution;

(d) A person moves to Kentucky and within twelve (12) months enrolls at an institution more than half time; or

(e) A person has a continuous absence of one (1) year from Kentucky.

(2) A presumption arising from subsection (1) of this section shall be overcome by presentation of evidence that is sufficient to demonstrate that a person is domiciled in and is a resident of Kentucky.

Section 5. Determination of Whether a Student is Dependent or Independent

(1) In a determination of residency status, an institution shall first determine whether a student is dependent or independent. This provision is predicated on the assumption that a depen-

dent person lacks the financial ability to live independently of the person upon whom the student is dependent and therefore lacks the ability to form the requisite intent to establish domicile.

(2) In determining the dependent or independent status of a person, the following information shall be considered as well as other relevant information available at the time the determination is made:

(a)1. Whether the person has been claimed as a dependent on the federal or state tax returns of a parent or other person for the year preceding the date of application for a determination of residency status; or

2. Whether the person is no longer claimed by a parent or other person as a dependent or as an exemption for federal and state tax purposes; and

(b) Whether the person has financial earnings and resources independent of a person other than an independent spouse necessary to provide for the person's own sustenance.

(3) An individual who enrolls at an institution immediately following graduation from high school and remains enrolled shall be presumed to be a dependent person unless the contrary is evident from the information submitted.

(4) Domicile may be inferred from the student's permanent address, parent's mailing address, or location of high school of graduation.

(5) Marriage to an independent person domiciled in and who is a resident of Kentucky shall be a factor considered by an institution in determining whether a student is dependent or independent.

(6) Financial assistance from or a loan made by a parent or family member other than an independent spouse, if used for sustenance of the student:

(a) Shall not be considered in establishing a student as independent; and

(b) Shall be a factor in establishing that a student is dependent.

Section 6. Effect of a Determination of Dependent Status on a Determination of Residency Status

(1) The effect of a determination that a person is dependent shall be:

(a) The domicile and residency of a dependent person shall be the same as either parent. The domicile and residency of the parent shall be determined in the same manner as the domicile and residency of an independent person.

(b) The domicile and residency of a dependent person whose parents are divorced, separated, or otherwise living apart shall be Kentucky if either parent is domiciled in and is a resident of Kentucky regardless of which parent has legal custody or is

entitled to claim that person as a dependent pursuant to federal or Kentucky income tax provisions.

(2)(a) If the parent or parents of a dependent person are Kentucky residents and are domiciled in Kentucky but subsequently move from the state, the dependent person shall be considered a resident of Kentucky while in continuous enrollment at the degree level in which currently enrolled.

(b) If continuous enrollment is broken or the current degree level is completed, the dependent person's residency status shall be reassessed when the circumstances detailed in subparagraph 1 of this paragraph are present.

Section 7. Member of Armed Forces of the United States, Spouse and Dependents; Effect on a Determination of Residency Status

(1) A member, spouse, or dependent of a member whose domicile and residency was Kentucky at the time of induction into the Armed Forces of the United States, and who maintains Kentucky as home of record and permanent address, shall be entitled to Kentucky residency status:

(a) During the time of active service; or

(b) If the member, spouse, or dependent returns to this state within six (6) months of the date of the member's discharge from active duty.

(2)(a) A member, spouse or dependent of a member of the Armed Forces of the United States stationed in Kentucky on active military orders shall be considered a Kentucky resident while the member is on active duty in this state pursuant to those orders if the member is not:

1. Stationed in Kentucky for the purpose of enrollment at an institution; *or*
2. On temporary assignment of less than one (1) year.

(b) A member, spouse or dependent of a member, shall not lose Kentucky residency status if the member is thereafter transferred on military orders while the member, spouse or dependent requesting the status is in continuous enrollment at the degree level in which currently enrolled.

(3) Membership in the National Guard or civilian employment at a military base alone shall not qualify a person for Kentucky residency status under the provisions of subsections (1) and (2) of this section.

(4) A person's residency status established pursuant to this section shall be reassessed if the qualifying condition is terminated.

Section 8. Status of Nonresident Aliens; Visas and Immigration

(1)(a) A person holding a permanent residency visa or classified as a political refugee shall establish domicile and residency in the same manner as another person.

(b) Time spent in Kentucky and progress made in fulfilling the conditions of domicile and residency prior to obtaining permanent residency status shall be considered in establishing Kentucky domicile and residency.

(2) A person holding a nonimmigrant visa with designation A, E, G, H-1, H-4 if accompanying a person with an H-1 visa, I, K, L, N, R, shall establish domicile and residency the same as another person.

(3)(a) An independent person holding a nonimmigrant visa with designation B, C, D, F, H-2, H-3, H-4 if accompanying a person with an H-2 or H-3 visa, J, M, O, P, Q, S, TD or TN shall not be classified as a Kentucky resident, because that person does not have the capacity to remain in Kentucky indefinitely and therefore cannot form the requisite intent necessary to establish domicile within the meaning of this administrative regulation.

(b) A dependent person holding a visa as described in paragraph (a) of this subsection, but who is a dependent of a parent holding a visa as described in subsection (2) of this section, shall be considered as holding the visa of the parent.

(c) A dependent person holding a visa described in subsection (2) of this section or paragraph (a) of this subsection, if a parent is a citizen of the United States and is a resident of and domiciled in Kentucky, shall be a resident of Kentucky for the purposes of this administrative regulation.

(4) A person shall be a Kentucky resident for the purpose of this administrative regulation if the person graduated from a Kentucky high school and:

(a) Is an undocumented alien;

(b) Holds a visa listed in subsections (2) or (3)(a) of this section; or

(c) Is a dependent of a person who holds a visa listed in subsections (2) or (3)(a) of this section.

(5)(a) Except as provided in paragraph (b) of this subsection, a person who has petitioned the federal government to reclassify visa status shall continue to be ineligible until the petition has been decided by the federal government.

(b) A person who has petitioned the federal government to reclassify visa status based on a marriage to a Kentucky resident and who can demonstrate that the petition has been filed and acknowledged by the federal government, may establish Kentucky domicile and residency at that time.

Section 9. Beneficiaries of a Kentucky Educational Savings Plan Trust

A beneficiary of a Kentucky Educational Savings Plan Trust shall be granted residency status if the beneficiary meets the requirements of KRS 164A.330(6).

Section 10. Criteria Used in a Determination of Residency Status

(1) A determination of Kentucky domicile and residency shall be based upon verifiable circumstances or actions. A single fact shall not be paramount, and each situation shall be evaluated to identify those facts essential to the determination of domicile and residency.

(2) The following facts, although not conclusive, shall have probative value in their entirety and shall be individually weighted, appropriate to the facts and circumstances in each determination of residency:

(a) Acceptance of an offer of full-time employment or transfer to an employer in Kentucky or contiguous area while maintaining residence and domicile in Kentucky;

(b) Continuous physical presence in Kentucky while in a non-student status for the twelve (12) months immediately preceding the start of the academic term for which a classification of Kentucky residency is sought;

(c)1. Filing of Kentucky resident income tax return for the calendar year preceding the date of application for a change in residency status; or

2. Payment of Kentucky withholding taxes while employed during the calendar year for which a change in classification is sought;

(d) Full-time employment of at least one (1) year while living in Kentucky;

(e) Attendance as a full-time, nonresident student at an out-of-state institution based on a determination by that school that the person is a resident of Kentucky;

(f) Abandonment of a former domicile or residence and establishing domicile and residency in Kentucky with application to or attendance at an institution following and incidental to the change in domicile and residency;

(g) Obtaining licensing or certification for a professional and occupational purpose in Kentucky;

(h) Payment of real property taxes in Kentucky;

(i) Ownership of real property in Kentucky, if the property was used by the student as a residence preceding the date of application for a determination of residency status;

(j) Long-term lease of at least twelve (12) consecutive months of non-collegiate housing;

(k) Marriage of an independent student to a person who was domiciled in and a resident of Kentucky prior to the marriage;

(l) Continued presence in Kentucky during academic breaks; and

(m) The extent to which a student is dependent on student financial aid in order to provide basic sustenance.

(3) Except as provided in subsection (4) of this section, the following facts, because of the ease and convenience in completing them, shall have limited probative value in a determination that a person is domiciled in and is a resident of Kentucky:

(a) Kentucky automobile registration;

(b) Kentucky driver's license; and

(c) Registration as a Kentucky voter.

(4) The absence of a fact contained in subsection (3) of this section shall have significant probative value in determining that a student is not domiciled in or is not a resident of Kentucky.

(5) A person shall not be determined to be a Kentucky resident by the performance of an act which is incidental to fulfilling an educational purpose or by an act performed as a matter of convenience. Mere physical presence in Kentucky, including living with a relative or friend, shall not be sufficient evidence of domicile and residency. A person shall respond to all information requested by an institution.

Section 11. Effect of a Change in Circumstances on Residency Status

(1) If a person becomes independent or if the residency status of a parent or parents of a dependent person changes, an institution shall reassess residency either upon a request by the student or a review initiated by the institution.

(2) Upon transfer to a Kentucky institution, a student's residency status shall be assessed by the receiving institution.

(3) A reconsideration of a determination of residency status for a dependent person shall be subject to the provisions for continuous enrollment, if applicable.

Section 12. Student Responsibilities

(1) A student shall report under the proper residency classification which includes the following actions:

(a) Raising a question in a timely manner concerning residency classification;

(b) Making application for change of residency classification in a timely manner with the designated office or person at the institution; and

(c) Notifying the designated office or person at the institution immediately upon a change in residency.

(2) If a student fails to notify an institutional official of a change in residency, an institutional official may investigate and evaluate the student's residency status.

(3)(a) If a student fails to provide, by the date specified by the institution, information required by an institution in a determination of residency status, the student shall be notified by the institution that the review has been canceled and that a determination has been made.

(b) Notification shall be made by registered mail, return receipt requested.

(c) Notification shall be made within ten (10) calendar days after the deadline for receipt of materials has passed.

(4) A student shall not be entitled to appeal a determination of residency status if the determination made by an institution is because a student has failed to meet published deadlines for the submission of information as set forth in subsection (3) of this section. A student may request a review of a determination of residency status in a subsequent academic term.

Section 13. Institutional Responsibilities.

Each institution shall:

(1) Provide for an administrative appeals process that includes a residency appeals officer to consider student appeals of an initial residency determination and which shall include a provision of fourteen (14) days for the student to appeal the residency appeals officer's determination;

(2) Establish a residency review committee to consider appeals of residency determinations by the residency appeals officer. The residency review committee shall make a determination of student residency status and notify the student in writing within forty-five (45) days after receipt of the student appeal;

(3) Establish a formal hearing process as described in Section 14 of this administrative regulation; and

(4) Establish written policies and procedures for administering the responsibilities established in subsections (1), (2), and (3) of this section and that are:

- (a) Approved by the institution's governing board;
- (b) Made available to all students; and
- (c) Filed with the council.

Section 14. Formal Institutional Hearing

(1) A student who appeals a determination of residency by a residency review committee shall be granted a formal hearing by an institution if the request is made by a student in writing within fourteen (14) calendar days after notification of a determination by a residency review committee.

(2) If a request for a formal hearing is received, an institution shall appoint a hearing officer to conduct a formal hearing. The hearing officer:

(a) Shall be a person not involved in determinations of residency at an institution except for formal hearings; and

(b) Shall not be an employee in the same organizational unit as the residency appeals officer.

(3) An institution shall have written procedures for the conduct of a formal hearing that have been adopted by the board of trustees or regents, as appropriate, and that provide for:

(a) A hearing officer to make a recommendation on a residency appeal;

(b) Guarantees of due process to a student that include:

1. The right of a student to be represented by legal counsel; and

2. The right of a student to present information and to present testimony and information in support of a claim of Kentucky residency; and

(c) A recommendation to be issued by the hearing officer.

(4) An institution's formal hearing procedures shall be filed with the Council on Postsecondary Education and shall be available to a student requesting a formal hearing.

Section 15. Cost of Formal Hearings

(1) An institution shall pay the cost for all residency determinations including the cost of a formal hearing.

(2) A student shall pay for the cost of all legal representation in support of the student's claim of residency. (17 Ky.R. 2557; eff. 4-5-91; Am. 22 Ky.R. 1656; 1988; eff. 5-16-96; 23 Ky.R. 3380; 3797; 4099; eff. 6-16-97; 24 Ky.R. 2136; 2705; 25 Ky.R. 51; eff. 7-13-98; 25 Ky.R. 2177; 2577; 2827; eff. 6-7-99; 749; 1238; eff. 11-12-2002.)

Deadline for Filing Residency Appeals

An application for a review of a determination of residency status shall be filed in the Office of Student Services no later than 30 days after the first day of classes of the term for which a determination of residency status is requested. Academic calendars are available in the Schedule of Courses, the University web site, and Offices of Admission. Pursuant to 13 KAR 2:045, Determination of Residency Status for Admission and Tuition Assessment Purposes, an institution may set other deadlines for submission of other information required by the Institution in a determination of residency status.

For specific information regarding the filing of an application, please refer to the Council on Postsecondary Education document 13 KAR 2:045, Determination of Residency Status for Admission and Tuition Assessment Purposes. Copies of the policy document are available in the Office of Student Services and Offices of Admission.

Submit the completed, signed, and notarized affidavit/application and ALL accompanying documentation to:

Office of Student Services
 Houchens Building, Room 160
 University of Louisville
 Louisville, KY 40292
 Phone (502) 852-5813/6528
 Fax (502) 852-3146

College of Arts and Sciences

J. Blaine Hudson, Ed.D., Dean

The following graduate programs are offered within the College of Arts and Sciences:

Administration of Justice – M.S.
 African American Theatre - C
 Art History – Ph.D.
 Art (Creative) and Art History – M.A.
 Biology – Ph.D.
 Biology – M.S.
 Chemistry – Ph.D.
 Chemistry – M.S.
 Clinical Psychology – Ph.D.
 English Rhetoric and Composition – Ph.D.
 English – M.A.
 Experimental Psychology – Ph.D.
 French – M.A.
 History – M.A.
 Humanities – Ph.D.
 Humanities – M.A.
 Mathematics – Ph.D.
 Mathematics – M.A.
 Pan-African Studies – C
 Pan-African Studies – M.A.
 Physics – Ph.D.
 Physics – M.S.
 Police Executive Leadership Development – C
 Political Science – M.A.
 Psychology – M.A.
 Public Administration – M.P.A.
 Sociology – M.A.
 Spanish – M.A.
 Theatre Arts – M.F.A.
 Urban and Public Affairs – Ph.D.
 Urban Planning – M.U.P.
 Women's and Gender Studies – C
 Women's and Gender Studies – M.A.

Master of Science in Administration of Justice

Major Code: ADJ
 Degree Code: MS
 Unit: GA
 Department Webpage: <http://www.louisville.edu/a-s/ja/>

Program Information

The goals of the Department of Justice Administration are for students to achieve a sound liberal arts education and a spe-

cialized understanding of the criminal justice system, criminal behavior, legal processes and the relationship of these phenomena to society.

Graduate studies in the Department of Justice Administration provide students with advanced social and behavioral science skills as well as a detailed and thorough understanding of crime, criminal justice and related processes. Graduates of this program are prepared to continue advanced studies in criminal justice or other social sciences and to assume mid and upper-level leadership positions within criminal justice programs and agencies.

The interdisciplinary nature of the program maintains the dynamic posture that allowed this crime related discipline to emerge and to mature quickly and successfully. Graduate students are given latitude in choosing elective courses in the Master of Science in the Administration of Justice. Elective courses related to the student's program of study are selected from the resources of the entire University. Courses in social work, public administration, law, business, and the various departments of the College of Arts and Sciences are possible electives that the student and his or her advisor may consider. With proper selection, the electives can complement the core criminal justice courses and produce a balanced, interdisciplinary program which is tailored to meet specific professional and career goals.

The combination of three elements, the degree programs, the Southern Police Institute and the National Crime Prevention Institute, makes the program in Justice Administration a unique blend of theory and practice.

- The Southern Police Institute, one of the oldest, most respected police management and administration educational programs in the United States.
- The National Crime Prevention Institute, the only center in the country devoted exclusively to training and educating crime prevention and loss prevention specialists and managers.

Programs are offered in two formats:

- evening courses on campus, and
- on-line via the internet

Admissions

Anyone seeking admission to the Graduate School, University of Louisville, for purposes of pursuing the Master of Science in the Administration of Justice must provide the following:

- Transcripts of all undergraduate and graduate work completed. The minimum requirement for admission is the Baccalaureate degree or its equivalent.
- Two letters of recommendation from individuals who can speak to the applicant's academic or professional capabilities.
- Scores on the General Test Section of the Graduate Record Examination (GRE).
- An original essay identifying the applicant's background, professional interests and goals. The essay should be 300-

500 words and should allow the faculty to better understand the applicant's motivation and potential for graduate work.

- Completed on-line application form for admission to the Graduate School, University of Louisville at <http://graduate.louisville.edu/app>.
- \$50.00 application fee, check or money order made payable to the University of Louisville.

The faculty in Justice Administration considers applications and supporting materials and recommend a disposition. The file must be complete to receive consideration. The minimum requirements for admission to degree status are a grade point average of at least 2.75 on a 4-point scale in senior-college courses and at least 900 on the combined verbal and quantitative scores of the GRE as well as a positive evaluation of the letters of recommendation from faculty familiar with the applicant's academic ability and the essay. In some instances students who fail to meet all requirements may be granted conditional admission.

General Requirements

The general requirements for the Master of Science degree in the Administration of Justice are the completion of at least 36 graduate credit hours. The completion of these credit hours may include either thesis or non-thesis options. The thesis option requires the completion of 30 semester hours of graduate level courses and a thesis for a total of 36 credit hours. The non-thesis professional paper option requires the completion of 33 semester hours of graduate courses plus a professional paper for a total of 36 credit hours.

At least a 3.0 grade average must be maintained for all graduate coursework. Core or specific courses required for graduation total 15 semester hours with the remaining courses being electives. Students must receive a minimum grade of "C" in required core courses. The composition of the list of elective courses will vary from student to student depending on the student's undergraduate major, aspirations and background.

The degree is offered in web-based format, see department webpage for more information. <http://www.louisville.edu/a-s/ja/>

Required Core Courses	Semester Hours Thesis	Total Professional Paper	Comp Exam
JA 621, The Criminal Justice System	3	3	3
JA 625, Legal Aspects of Criminal Justice Management	3	3	3
JA 643, Theories of Crime and Delinquency	3	3	3

JA 649, Applied Statistics in Criminal Justice	3	3	3
JA 650, Research Methods in Criminal Justice	3	3	3
Electives (to be approved by advisor)	15	18	21
Thesis	6		
Professional Paper		3	
Minimum Total	36	36	36

Certificate in Police Executive Leadership Development

Admission to the Program

Applicants must meet the standards for conditional admission to the Master of Science in Administration of Justice, including an earned Bachelor's degree and appropriate letters of recommendation. They must also achieve a qualifying score on the Southern Police Institute's admission examination and be recommended by the Chief Executive Officer of their supporting agency. Applications are reviewed for eligibility by the Southern Police Institute's faculty who are members of the University's Graduate Faculty and the Department of Justice Administration.

The curriculum of the Administrative Officers Course (AOC) of the Southern Police Institute may be taken only by students regularly enrolled in the Institute.

Curriculum

JA 576.....3 credit hours
 JA 612.....3 credit hours
 JA 625.....3 credit hours
 JA 665.....3 credit hours
 Total Hours.....12 credit hours

The Southern Police Institute offers two twelve-week courses annually.

Enrollment is normally limited to persons employed in criminal justice professions. The curriculum is designed to prepare student-officers for administrative careers in law enforcement. Students who are accepted in to the Southern Police Institute are enrolled as full-time non-degree students in the Graduate School. Students who successfully complete the courses earn 12 hours of graduate credit and receive a Certificate in Police

Executive Leadership Development. Content of the individual courses as well as the overall content of the program is evaluated periodically and changes made to meet the needs of the law enforcement community.

This program is pending approval from The Council on Post-secondary Education. Approval expected winter/spring 2006.

Administration Justice Departmental Faculty

Professors

Deborah G. Wilson, *Chair*
Gennaro F. Vito, *Vice-Chair & Graduate Coordinator*
J. Price Foster
Richard A. Tewksbury
William F. Walsh, *Director, Southern Police Institute*

Associate Professors

Terry D. Edwards
Elizabeth L. Grossi
Thomas W. Hughes

Assistant Professors

George E. Higgins
Jeffrey S. Magers
Melissa L. Ricketts

Emeritus Faculty

B. Edward Campbell
Ronald M. Holmes
John C. Klotter

Doctor of Philosophy in Art History

Major Code: ARTH
Degree Code: PHD
Unit: GA
Department Webpage: <http://www.louisville.edu/a-s/finearts/>

Program Information

Coursework required for the Ph.D. in Art History includes completion of the M.A. plus 15 hours ARTH 500-level electives, 15 hours ART 600-level electives, 6 hours of Dissertation Research, 6 hours of graduate level electives outside art history program, for a total of 72 hours. Additional 600-level courses may be substituted for 500-level.

Up to a total of 15 hours of 500 or 600 level electives outside Art History may be substituted for Art History electives of similar level provided they are appropriate and are approved in advance by the student's advisor.

Each student must complete at least one graduate-level course in each of the following areas: Ancient, Medieval, Renaissance, Baroque, and Modern. Students who have not completed that distribution as part of the M.A. will have to do so before completing the Ph.D.

The Art History Placement Essays must be taken during the first semester in the Art History Program. It is normally given in the first week of September and the first week of February.

Two languages, either French or German and one additional language appropriate to the student's course of study, are required. This requirement may be fulfilled by demonstrating reading competence at the intermediate level in one of three ways: placement exam; completion of undergraduate coursework at the intermediate level with a grade of "B" or better; or passing a departmentally-administered language exam. The requirement in one language must be fulfilled in the first year.

Through course work and independent study, each student must prepare her/himself to pass written comprehensive exams in two areas (majors, minor) before admission to candidacy. Language requirements must have been met and most course work completed before a student may take this exam.

After being admitted to candidacy, the student must write a dissertation and defend it in a final oral examination.

Master of Arts in Art (Creative) and Art History

Major Code: ART
Degree Code: MA
Unit: GA
Department Webpage: <http://www.louisville.edu/a-s/finearts>

Program Information

Students may receive a Master of Arts degree in the Department of Fine Arts by completing thirty-one (31) hours of graduate study divided between work in the Core Curriculum and work in one of the following three tracks of study: Art History, Critical and Curatorial Studies or Studio Art.

Core Curriculum Hours

ARTH 541, Modern Perspectives in the Visual Arts	3
Art History Elective (500 or 600 level)	3
Elective - Outside the Department of Fine Arts (with approval of advisor)	3
Fine Arts Elective (outside their Fine Arts Track)	3
Thesis Guidance	3
Graduate Seminar	1
Total	16

Concentration in Art History

Applicants for admission to the Master's Program in this track are expected to demonstrate competence in the history of art, equivalent to an undergraduate major.

The Art History Placements Essays must be taken within the first year of the program. It is normally given in the first week of September and the first week of February.

The requirements of one foreign language must be satisfied during the first year in the Art History Concentration. Language requirements may be fulfilled by completing the intermediate level (usually 12 hours) of a language with a grade of "B" or better or by taking a departmentally administered language exam. Language exams are scheduled for the first Friday in October and March.

Each student must complete a core curriculum (16 hours) consisting of Art History 541 ("Modern Perspective in the Visual Arts"), six (6) hours of 500 or 600-level electives in the Department of Fine Arts, three (3) hours of 500 or 600-level electives outside the Department, three (3) hours of thesis guidance, and a one (1) hour graduate seminar.

The concentration in Art History will require fifteen (15) hours of 500 or 600-level courses with a minimum of one course in each of the following areas: Ancient or Medieval; Renaissance or Baroque; and Modern, concluding with a written thesis. The thesis consists of a research paper demonstrating critical knowledge of relevant sources, skill in analysis and interpretation, and ability to present the results in a well-organized and intelligent manner. The thesis must be defended in an oral examination. A reading knowledge of one foreign language is required (see above).

Concentration in Critical and Curatorial Studies

Applicants for admission to the Master's Program in this track are expected to demonstrate competence in the history of art, studio art or arts management equivalent to an undergraduate major. Each student must complete a core curriculum (16 hours) consisting of Art History 541 ("Modern Perspectives in the Visual Arts"), six (6) hours of 500 or 600-level electives in the Department of Fine Arts, three (3) hours of 500 or 600-level electives outside the Department, three (3) hours of thesis guidance, and a one (1) hour graduate seminar.

The concentration in Critical and Curatorial Studies will require fifteen (15) hours of coursework consisting of Approaches to Critical Inquiry, Museum Methods I and II, Arts Management, and Internship, concluding with a written thesis, exhibition or a curatorial project. The exhibition or curatorial project may be produced in cooperation with the University's Galleries, the J.B. Speed Art Museum or in another museum or gallery authorized by the Department, and should take place during the candidate's last year of study. To fulfill this requirement through an exhibition or project, the candidate must submit a prefatory statement written by the candidate, and documentation of the exhibit or project. This

documentation may include an exhibition catalogue and/or photographic reproductions of the exhibition or project in one of the following forms: black and white photographs, color photographs, or slides placed in plastic sleeves to be bound into the thesis. The statement will be submitted in conformity with the regulations governing the form and presentation of the written master's thesis.

Concentration Courses Hours

ARTH 542 Approaches to Critical Inquiry	3
Museum Methods I & II	6
Arts Management	3
ARTH 591 Internship	3
Written Thesis with Exhibition or Curatorial Project	
Total	15

Concentration in Studio Art

Applicants for admission to the Master's Program in this track are expected to complete training equivalent to an undergraduate major. To demonstrate his/her ability to pursue study at the graduate level, a student must submit examples of his/her work to the department by November 1 for spring semester admission and April 1 for fall semester admission. Contact the department for complete portfolio requirements.

Each student must complete a core curriculum (16 hours) consisting of Art History 541 ("Modern Perspectives in the Visual Arts"), six (6) hours of 500 or 600-level electives in the Department of Fine Arts, three (3) hours of 500 or 600-level electives outside the department, three (3) hours of thesis guidance, and a one (1) hour graduate seminar.

The concentration in Studio Arts will consist of fifteen (15) hours of 500 or 600-level courses taken in 2-D Studios, and/or 3-D Studios concluding with a thesis exhibition (listed below). The thesis exhibition, which must be authorized by the Department, should take place during the candidate's last semester of study. To accompany this exhibition, the candidate must submit a catalogue containing a prefatory statement written by the candidate, a properly documented list of works in the exhibition, photographic reproductions of the work in one of the following forms: black and white photographs, color photographs, or slides placed in plastic sleeves to be bound into the thesis. The catalogue will be submitted in conformity with the regulations governing the form and presentation of the written master's thesis.

Core Area

Studio courses (500 or 600 level) with courses to be selected in consultation with thesis advisor

Thesis Exhibition with Thesis Statement.
Total of 15 hours.

Total Program = 31 hours

Fine Arts Faculty

Professors

James Grubola, *Chair*
Ying Kit Chan
Robert L. Douglas, Sr.
Lida G. Gordon
Stephanie J. Maloney
Steven Skaggs
John Whitesell

Associate Professors

Thomas Buser
Linda M. Gigante
Barbara L. Hanger
Jay M. Kloner
Mark A. Priest

Assistant Professors

Todd Burns
Mary Carothers
Mitch Eckert
Christopher B. Fulton
Benjamin Hufbauer
Scott Massey

Emeritus/Emerita Faculty

Henry Chodkowski, Jr.
Dario A. Covi
Suzanne Mitchell
William D. Morgan

Doctor of Philosophy in Biology

Major Code: BIOL
Degree Code: PHD
Unit: GA
Department Webpage: <http://www.louisville.edu/a-s/biology/>

Program Information

A broad range of courses are taught in most biological disciplines, although the Department is focused in two major direc-

tions. The Divisions of Molecular, Cellular, and Developmental Biology (MCD) and Evolution, Ecology and Behavioral Biology (EEB) incorporate current areas of special interest in environmental microbiology, population and microbial genetics, developmental biology, plant and animal physiology, metabolism, phycology, plant and animal ecology, behavioral ecology, invertebrate zoology, and community and ecosystem ecology of large rivers, small streams, and wetlands.

Students seeking the Ph.D. Degree in Biology traditionally have a master's degree or its equivalent; however, students may enter the program with only the baccalaureate degree. Generally, the first year or two is spent in course work, research is begun by the second year, and the thesis/dissertation completed in the final year.

In addition, a cooperative Ph.D. Program in Biology exists with Murray State University. Students perform dissertation research under the direction of a major professor at one of these institutions and obtain the doctorate through the University of Louisville.

Requirements for the Ph.D. degree in Biology

	Hours	Total
One course to be selected by the student's committee from each Foundations in Biology category:		
History/Philosophy of the Biological Sciences	1	
Biostatistics	4	
Evolutionary Biology (courses that cover the evolutionary history and/or phylogenetic relationships of molecules or organisms)	4	9
Two courses to be selected from within an Area of Focus:		
A. Ecology, Evolution and Behavioral (EEB) Biology Focus Area:		
Population and Community Ecology	4	
Ecosystem Ecology or Behavior	4	17
B. Molecular, Cellular and Developmental (MCD) Biology Focus Area:		
Genetics/Cellular (courses that discuss the biochemistry and molecular genetics of life or describe the cell as the structural and functional unit of life)	4	
Physiology (courses that discuss life processes at the level of the organism)	3 / 4	17 / 18
Advanced Biology Electives	14 / 15	32
Dissertation Research	9	41

Master of Science in Biology

Major Code: BIOL

Degree Code: MS

Unit: GA

Department Webpage: <http://www.louisville.edu/a-s/biology/>

Program Information

The degree program is available to qualified individuals possessing a bachelor's degree from an accredited college or university.

A Biology undergraduate major is preferred. However, other majors containing sufficient Biology, Chemistry and Math may be acceptable.

The Department of Biology offers Master's degrees with programs of study tailored to the needs and interests of a diverse student population. Students may enroll on a full or part-time basis. The Department of Biology offers both thesis and non-thesis options.

The thesis option is generally chosen by students with career goals which include a research emphasis. Students choosing this option take course work and carry out an intensive independent research project under the supervision of a member of the Graduate Faculty, culminating in a written thesis based upon the research project. The non-thesis option is usually chosen by those who wish to advance their knowledge of Biology but are not sure of a specific career goal or do not anticipate a research emphasis in their future.

Students who wish to pursue an accelerated non-thesis Master's Degree will be allowed to apply up to nine (9) hours of coursework taken for graduate credit while enrolled as an undergraduate. An additional twenty-four (24) hours of graduate coursework taken in addition will constitute the minimum number of credit hours for obtaining the non-thesis Master's in the accelerated program.

Program Admission Procedure

The guidelines for accelerated program are as follows:

1. Students must:

- apply for admission to this program no later than the end of the Junior year [a total of 90 degree applicable hours], and
- must have completed Biology 240/242/244, 329, 301/302, and 330/331 with grades of "B" or better. Application forms are available from the Department of Biology office (139 LF) or the Director of Graduate Studies (210 LF). It is suggested that one of the recommendations to be submitted by the applicant be from the student's undergraduate advisor in their major department.

2. The application will be reviewed by the Graduate Committee of the Department of Biology. A 3.35 grade point average

and acceptable test scores [minimum of 1100 combined in the verbal and quantitative sections of the Graduate Record Exam, scores of eight (8) or greater in each of the three sections of the Medical College Admission Test, or scores of 17 or greater in the four sections of the Dental Admissions Test] will be required for admission to the program.

3. The student may take a maximum of nine (9) hours for graduate credit during the senior year, which will also apply to the requirements for the baccalaureate degree in Biology. These nine hours must consist of coursework designed to fulfill the 'General Background Courses' category of coursework in the Graduate curriculum.

4. Students who enroll in the accelerated program will be non-thesis students and must adhere to all policies pertaining to Graduate Students in the Department of Biology Graduate Student Regimen.

5. At the discretion of the student's advisory committee, Honors Research projects mentored by departmental faculty will be accepted for the 'Research Experience' required in the non-thesis track.

The following requirements must be met in order to be admitted to the Ph.D. or M.S. graduate programs in the Department of Biology.

1. The applicant must have a baccalaureate degree with a major in biology or an acceptable sub-discipline of biology.

2. The applicant must meet the admission standards of the Department of Biology. These are:

- An undergraduate GPA of 3.0 or better;
- A composite score of at least 1100 on the General Test Section (verbal + quantitative) of the Graduate Record Examination. An MCAT score of at least 8 on each section or a score of at least 17 on each section of the DAT are acceptable alternatives.
- For foreign students from non-English speaking countries a TOEFL Examination score of 535 or better on the paper-based exam, or 235 or better on the computer-based test or 83 on the internet-based test is required. Students holding a baccalaureate or advanced degree from an accredited institution in the United States are exempt from this requirement.

3. All applicants should review the research specialties of departmental faculty to ensure that an area compatible with the student's research interest is available. Applicants for the Ph.D. program must communicate with a member of the Biology faculty prior to admission and receive at least tentative agreement that the member will be willing to serve as major professor. Links to faculty e-mail addresses are available at <http://www.louisville.edu/a-s/biology>. All students must have a mentor by the end of their first semester in the program.

Your application will be complete when we have all of the following (final action on your application cannot be taken until all items have been received) :

Send to the Office of Graduate Admissions, University of Louisville, Louisville, KY 40292:

1. a completed Application form and application fee;
2. one official transcript of all previous undergraduate and graduate work;
3. Graduate Record Examination Scores (General Test Section), MCAT or DAT scores;
4. two or more letters of recommendation from persons familiar with your academic performance and;
5. for foreign students, results of the TOEFL Examination.

Send to the Director of Graduate Studies, Department of Biology, University of Louisville, Louisville, KY 40292:

1. a completed Information Form which can be found on the Biology web page at <http://www.louisville.edu/a-s/biology/graduate.html>.

Deadline for completed applications to be reviewed are: July 15 for Fall semester admission, December 1 for Spring semester admission, and April 15 for Summer term admission. If these dates fall on a weekend, the deadline is the next working day.

The official notification of admission or denial will come from the Graduate School, and will be based on a recommendation from the Department of Biology.

Notification of acceptance to the Department of Biology Graduate program does not carry with it the promise of financial support. However, all students admitted to the program will be considered for one of the following types of financial support, if they qualify.

Graduate Teaching Assistantships

Graduate Teaching Assistantships (GTA) are awarded by the Graduate Committee of the Department of Biology to meet instructional needs of the Department and enhance the educational progress of the student. A monthly stipend, tuition remission and health insurance are provided. All applicants selected for GTA support by the Department will be notified by letter.

Another source of financial support may be available from individual faculty members who have extramural or intramural funding that provides support for a graduate student as a Graduate Research Assistant. The faculty member holding a grant selects eligible graduate students to fill GRA positions.

If you have questions or need further information, please contact the Director of Graduate Studies, Department of Biology, University of Louisville, Louisville, Kentucky 40292 by mail, phone [(502) 852-6771], or by FAX, [(502) 852-0725]. The current Director of Graduate Studies is Dr. Joseph M. Steffen (E-mail: joe.steffen@louisville.edu).

Requirements for the M.S. degree in Biology and for the Accelerated BA-BS/MS in Biology

One course to be selected from each of two (thesis option) or three (non-thesis option) of the following categories:

	Thesis	Non-Thesis
General Background Courses (500 or 600 level)		
Cellular/Physiology	3 - 4	3 - 4
Subcellular/Genetics	3 - 4	3 - 4
Evolution or Systematics	3 - 4	3 - 4
Population, Community, or Ecosystem Ecology	3 - 4	3 - 4
Total	6 - 8	9 - 12
Other Courses		
Statistics (Biology 650)	4	4
Electives	11 - 14	13 - 17
Thesis Research (600 level)	6	0
Research Experience (Biology 516, 608, 664 or 691)	0	3 - 4
Minimum Total	30	33

NOTE: A minimum of 12 (thesis option) or 17 (non-thesis option) semester hours, exclusive of thesis credit, must be in courses at the 600 level. Students intending to seek a Ph.D. degree later are advised to take as many of their courses as possible at the 600 level or above.

Biology Departmental Faculty

Professors

Ronald D. Fell, *Chair*
 Ronald M. Atlas, *Dean, Graduate School*
 Gary A. Cobbs
 Lee A. Dugatkin
 Daniel K. Dykhuizen
 Paul W. Ewald
 William D. Pearson
 Michael H. Perlin

Associate Professors

Margaret M. Carreiro
 Perri K. Eason
 Jeffrey D. Jack
 Arnold J. Karpoff
 Martin G. Klotz
 Joseph M. Steffen

Assistant Professors

James E. Alexander
 Cynthia Corbitt
 Awdesh Kalia
 Jennifer Mansfield-Jones
 Susanna K. Remold
 David J. Schultz
 Eric V. Wong

Emeritus Faculty

William S. Davis
 Roger G. Lambert
 Varley E. Wiedeman

Doctor of Philosophy in Chemistry

Major Code: CHEM
 Degree Code: PHD
 Unit: GA
 Department Webpage: <http://www.louisville.edu/a-s/chemistry/>

Program Information

The Department of Chemistry, in the College of Arts and Sciences, offers graduate programs leading to the M.S. and Ph.D. degrees in chemistry with options in analytical chemistry, biochemistry, biomolecular structure and engineering, inorganic chemistry, organic chemistry, physical chemistry, and chemical physics.

The general requirements for admission to the Graduate School, for admission to candidacy, and for the doctoral degree are stated in the General Information section of this catalog. The following additional provisions apply to the programs leading to the Doctor of Philosophy in Chemistry.

Program Admission Procedure

Students seeking a graduate degree in chemistry should meet the following requirements:

1. A B.A. or B.S. degree in chemistry or in a related field such as physics, engineering, or mathematics. It is expected that students will have obtained a background in chemistry equivalent to 36 hours of undergraduate coursework. Students planning to pursue graduate study work in chemical physics may substitute some of the chemistry hours with advanced courses in physics or mathematics beyond those required for a B.A. or B.S. in chemistry. Students with inadequate preparation will be required to register for specific courses in the area of deficiency. Some of these courses, subject to approval by the department, may be accepted for graduate credit. Admission to graduate study in chemical physics is made on the recommendation of the entrance committee for that option.

2. A minimum quality point standing of 3.0/4.0.

3. Submission of Graduate Record Examination scores (quantitative and verbal scores totaling at least 1000 with an analytical score of 2.5 or totaling at least 900 with an analytical score of 3.0).

In individual cases, the conditional admission of a student who does not satisfactorily meet the above requirements may be recommended by the department to the Graduate School. If admission is granted, that student will be subject to those conditions specified by the department or Graduate School as being necessary to remedy the conditional admission.

Curriculum Requirements

The requirements for the Doctor of Philosophy degree in chemistry are as follows:

1. The general requirements as stated in the General Information section of this catalog.

2. Completion of a core course curriculum to assure breadth of knowledge. This requirement is satisfied by the completion of four (4) advanced (core) courses selected from at least four of the following six areas:

- Analytical Chemistry (CHEM 620, 621, 622, or 625)
- Biochemistry (CHEM 645 or 647)
- Inorganic Chemistry (CHEM 653 or 654)
- Organic Chemistry (CHEM 678 or 679)
- Physical Chemistry (CHEM 661 or PHYS 621), (CHEM 662 or PHYS 622 or CHEM 683, 684)
- Physics (PHYS 605 or 611)
- Ph.D Students will complete two additional advanced courses in the area selected for research work.

3. Students with a native language other than English must show a proficiency in English. This requirement may be met with a grade of "B" in Eng. 101 (or equivalent) or an acceptable score on a standardized test (such as the TOEFL or Michigan test).

4. Satisfactory performance on a written comprehensive exam based upon an original research proposal and upon in-depth knowledge of the applicant's area(s) of specialization. The written comprehensive exam demands a mastery of fundamentals, course work, and recent literature. Successful completion of the written exam is required within two years of entering the doctoral program.

5. Acceptable presentation of two seminars. The literature seminar must be presented no later than the fifth semester of graduate studies and is based on a topic of current chemical interest. The research seminar is based on the results of student's research and must be presented about a year prior to the final defense of the degree.

The general requirements for the Doctor of Philosophy Degree in Chemistry are those given in the General Information section of this catalog.

At the beginning of the semester during which a student expects to fulfill the requirements for a degree, an application for that degree must be presented to the Dean of the Graduate School. Departmental approval of the student's admission to candidacy is shown on the degree application. Approval will not be granted unless all of the general and departmental requirements for candidacy have been met.

Master of Science in Chemistry

Major Code: CHEM

Degree Code: MS

Unit: GA

Department Webpage: <http://www.louisville.edu/a-s/chemistry/>

Program Information

The Department of Chemistry, in the College of Arts and Sciences, offers graduate programs leading to the M.S. and Ph.D. degrees in chemistry with options in analytical chemistry, biochemistry, biomolecular structure and engineering, inorganic chemistry, organic chemistry, physical chemistry, and chemical physics.

The general requirements for admission to the Graduate School, for admission to candidacy, and for the master's degree are stated in the General Information section of this catalog. The following additional provisions apply to the program leading to the Master of Science in Chemistry.

Program Admission Procedure

Students seeking a graduate degree in chemistry should meet the following requirements:

1. A B.A. or B.S. degree in chemistry or in a related field such as physics, engineering, or mathematics. It is expected that students will have obtained a background in chemistry equivalent to 36 hours of undergraduate coursework. Students planning to pursue graduate study work in chemical physics may substitute some of the chemistry hours with advanced courses in physics or mathematics beyond those required for a B.A. or B.S. in chemistry. Students with inadequate preparation will be required to register for specific courses in the area of deficiency. Some of these courses, subject to approval by the department, may be accepted for graduate credit. Admission to graduate study in chemical physics is made on the recommendation of the entrance committee for that option.
2. A minimum quality point standing of 3.0/4.0.
3. Submission of Graduate Record Examination scores (quantitative and verbal scores totaling at least 1000 with an analytical score of 2.5 or totaling at least 900 with an analytical score of 3.0).

In individual cases, the conditional admission of a student who does not satisfactorily meet the above requirements may be recommended by the department to the Graduate School. If admission is granted, that student will be subject to those conditions specified by the department or Graduate School as being necessary to remedy the conditional admission.

Program Requirements

The requirements for the Master of Science Degree in chemistry are as follows:

1. The general requirements as stated in the General Information section of this catalog.
2. Completion of a core course curriculum as described in the section on Candidacy for the Ph.D. degree.
3. Students with a native language other than English must show a proficiency in English. This requirement may be met with a grade of "B" in Eng. 101 (or equivalent) or an acceptable score on a standardized test (such as the TOEFL or Michigan test).
4. Acceptable presentation of a one-hour literature seminar on a topic of current chemical interest. This seminar must be presented no later than the fifth semester of graduate studies.

Departmental Faculty

Professors

George R. Pack, *Chair*
 Richard P. Baldwin
 Robert M. Buchanan
 Donald B. DuPré
 Dorothy H. Gibson
 Gerald B. Hammond
 Mark E. Noble
 Richard J. Wittebort
 John L. Wong
 M. Cecilia Yappert
 Teresa W. M. Fan

Associate Professors

Craig A. Grapperhaus
 Pawel M. Kozlowski
 Frederick Luzzio
 Muriel C. Maurer
 John F. Richardson
 John G. Arnez

Assistant Professors

Aleeta M. Powe
 Christine V. Rich
 Heather A. Rypkema
 Francis P. Zamborini
 John W. Brown

Emeritus Faculty

Thomas H. Crawford
N. Thornton Lipscomb
Gradus L. Shoemaker
K. Grant Taylor
Charles A. Trapp

Doctor of Philosophy in English Rhetoric and Composition

Major Code: ERC
Degree Code: PHD
Unit: GA
Department Webpage: <http://coldfusion.louisville.edu/webs/a-s/english>

Program Information

Ph.D. in Rhetoric and Composition provides graduate training in the history and theory of rhetoric, theory and empirical research in composition, an area of British or American literature, linguistics, and the relation of rhetoric and composition to allied fields (e.g. critical theory, cultural studies, cognitive psychology, educational research). Goals for the Ph.D. are that students will 1) gain specialized and current disciplinary knowledge; 2) write a dissertation in which they initiate and complete specialized research that addresses an original and significant question in rhetoric and composition; 3) acquire experience and expertise as writing teachers.

Admission to the Ph.D. Program

There are a limited number of openings in the doctoral program; therefore, admission is competitive. All doctoral degree applicants should present the following documents:

1. Complete transcripts of previous undergraduate and graduate work;
2. Three letters of recommendation that speak to the applicant's potential for success in a doctoral program;
3. A written statement of no more than a thousand words detailing the applicant's professional goals in the field of rhetoric and composition;
4. Reports on the Graduate Record Examination General Test.
5. A sample of scholarly, critical writing (15-20 pages);
6. International students must also present scores of at least 600 on the TOEFL Examination (paper test) or at least 210 on the TOEFL Exam (computer test).
7. Application for Graduate Teaching Assistantship, including a statement of teaching experience and goals.

The English Graduate Committee reviews applications for the doctoral program in rhetoric and composition and makes all admission decisions. Applicants must have a Master's degree at the time of matriculation. Completed applications are due no later than February 1 st for Fall admission only.

All applicants must fulfill the general requirements of the Graduate School.

Ph.D. Degree Requirements

All doctoral students are expected to complete a minimum of 51 graduate hours, distributed as follows:

	Semester Hours	Total
Required (12 hours):		
ENGL 602, Teaching College Composition	3	
ENGL 620, Research in the Composing Process	3	
ENGL 689, Directed Reading for Comprehensive Preliminary Exams	3	
ENGL 691, Contemporary Theories of Interpretation	3	12
Additional Requirements (15 hours from the following categories):		
Pedagogy and Program Administration	3	
Rhetoric	3	
Literature	9	15
Electives (12 hours):		
Choose from offerings in Rhetoric and Composition. One elective may be taken outside these offerings, including a course outside the department		12
Dissertation (690)	12	12
Minimum Total		51

Ph.D. Language Requirement

Each doctoral student must demonstrate proficiency in one foreign language and either a second foreign language, an advanced level of proficiency in the first foreign language, or a research or retrieval skill (ordinarily statistics or a computer language) approved by the Graduate Director.

Time Limit and Residency for Ph.D.

All work for the Ph.D. must be completed within six years of admission to the program.

A year of full-time residency in the English doctoral program consists of the completion of two consecutive semesters of nine hours each.

For students holding Graduate Teaching Assistantships, a year of full-time residency in the English doctoral program is eighteen semester hours within a single academic year. Students ordinarily take nine hours of course work and teach six hours in the fall and spring terms. Summer registration for a maximum of six hours is optional.

Professional Requirements

Sometime during their tenure in the doctoral program, students must participate in a year-long supervised teaching-intern program. Intern experience may include teaching in regular first year and advanced writing courses and tutoring in the Writing Center. Students who wish to complete their intern experience at another institution must make specific arrangements to do so with the Director of Graduate Studies in English. Such arrangements require the approval of the English Graduate Committee.

Graduate Teaching Assistants automatically fulfill the professional requirement once they have completed one successful year as a Graduate Teaching Assistant.

Comprehensive Preliminary Examination

When students have completed coursework, satisfied foreign language requirements, and received the approval of the Graduate Committee, they may sit for the Comprehensive Preliminary Examinations. (See the Graduate Program Guidelines for a detailed explanation of these examinations.)

Admission to Candidacy

Students will be admitted to candidacy for the Ph.D. after they have completed coursework, met the foreign language and professional requirements, and passed the comprehensive preliminary examinations; they remain doctoral degree candidates until they complete the dissertation.

Dissertation

The doctoral dissertation requires the equivalent of a full year of graduate work and involves registration in at least 12 credit hours in English 690.

The Dean of the Graduate School, upon the recommendation of the Director of Graduate Studies in English, in consultation with the student, will appoint the dissertation director and reading committee. The dissertation committee will be appointed immediately after the approval, by the English Graduate Committee, of the student's dissertation prospectus. This approval must be

submitted to the Graduate School at least nine months before the final dissertation oral examination.

Guidelines for writing the dissertation prospectus are included in the English Department's Graduate Program Guidelines. The dissertation will be submitted, in the form prescribed by the Graduate School, not less than six weeks before the end of the term in which the doctoral degree is to be conferred.

Final Oral Examination

The defense of the dissertation will be scheduled at least three weeks before the end of the term. The dissertation will then be revised according to the dissertation committee's recommendations. One copy shall be submitted to the Graduate School and one bound copy to the Department of English. Along with the dissertation, the candidate shall submit an abstract for publication in Dissertation Abstracts.

Master of Arts in English

Major Code: ENGL

Degree Code: MA

Unit: GA

Department Webpage: <http://www.louisville.edu/a-s/english/programs/>

Program Information

M. A. in English provides graduate training in literatures written in English, linguistics, creative writing, and rhetoric and composition. Goals for the M.A. are that students will 1) gain advanced knowledge of the British and American literary traditions; 2) write a thesis or culminating project in which they initiate and complete specialized research addressing a significant question in literature or rhetoric and composition, or produce a significant body of creative work.

Admission to the M.A. Program

All M.A. degree applicants should present the following documents:

1. Complete transcripts of previous undergraduate and graduate work;
2. Two letters of recommendation, normally from persons with recent experience of the applicant's academic performance;
3. Score reports on the Graduate Record Examination General Test;
4. A sample of critical writing (at least ten pages);
5. International students must also submit reports of the TOEFL examination.

Applicants presenting the following credentials are eligible for degree status in the English M.A. program:

1. A "B" or better average in the major from an accredited college or university;
2. A "B" or better average overall from an accredited college or university;
3. A score in the 50th percentile or better on the GRE Verbal section;
4. Letters of recommendation that give promise of success in the program;
5. A writing sample that promises success in the program;
6. International students must also present scores of at least 600 on the TOEFL Examination (paper test) or at least 210 on the TOEFL Exam (computer test).

The Director of Graduate Studies in English reviews all applications and, in consultation with the English Graduate Committee, makes all admission decisions. Complete applications to the Master's program are considered throughout the academic year. Applicants with a B.A. in a field other than English, or with fewer than 24 credit hours for an English major, may be eligible for admission to the M.A., but the Graduate Committee may require that such students make up deficiencies on an individual basis.

In extraordinary circumstances, an applicant with incomplete credentials may petition the English Graduate Committee for admission to provisional status. Admission in non-degree status is at the discretion of the English Department Director of Graduate Studies as governed by Graduate School policies.

All applicants must fulfill the general requirements of the Graduate School.

Degree Requirements

The Master of Arts in English requires 30 hours of academic work at the graduate level. In addition to fulfilling the core requirements, students may take additional work in literary studies, creative writing, or rhetoric and composition.

Required Courses— 15 hours:

1. English 601: Introduction to English Studies
2. English 691: Contemporary Theories of Interpretation
3. Two courses in Pre-1800 literature
4. One course in Post-1800 literature

Electives – 9-15 hours:

Students may take no more than three 500-level courses. Creative writing courses (including up to six hours of thesis guidance) may total no more than 15 hours.

Students may petition the Graduate Committee to take courses outside the Department of English that are relevant to their individual programs.

Foreign Language Requirement

The student must demonstrate proficiency in an approved foreign language. The foreign language requirement must be satisfied before the thesis can be defended. (See the Graduate Program guidelines for more information.)

Admission to Candidacy

Students are admitted to candidacy for the M.A. after they have completed coursework and met the foreign language requirement; they remain master's degree candidates until they complete a thesis or culminating project.

Thesis Option: 24 hours of coursework + 6 hours of Thesis Guidance

Students who choose this option will be expected to write a critical or creative thesis that is a genuine contribution to the field, shows an awareness of current academic practice, and employs methods appropriate to an extended academic project. Students must submit a prospectus and have it approved at least three months before the thesis oral examination is held. Guidelines for writing a prospectus are in the English Department's Graduate Program Guidelines.

Non-Thesis Option: 30 hours of coursework + a culminating project

Students who choose this option may, as a culminating project, select one of their strongest seminars papers or creative writing projects to revise; the purpose of the project is to give students the opportunity to revise a seminar paper with publication in mind. To this end, students will write a brief prospectus (2-3 pages plus bibliography) detailing the types of revisions they will make to the paper. A screening committee will evaluate the prospectus and, upon its approval, the student will make the necessary revisions under the guidance of a faculty advisor.

Time Limit and Residency for Masters

All work for the M.A. must be completed within six years of admission to the program. The student must complete a minimum of 24 hours at the University of Louisville.

English Departmental Faculty

Professors

Susan Griffin, *Chair*
 Dale B. Billingsley, *Associate University Provost*
 Thomas B. Byers
 Geoffrey A. Cross
 Julia C. Dietrich

Alan C. Golding
 Dennis R. Hall
 Suzette A. Henke, *Thruston B. Morton, Sr. Professor*
 Debra Journet
 Estella C. Majozo
 Carol Mattingly, *Director of Writing Center*
 Sena J. Naslund
 Jeffrey T. Skinner

Associate Professors

David Anderson
 Matthew Biberman
 Beth Boehm, *Vice Chair*
 Marc Bousquet
 Karen Chandler
 Paul F. Griner, *Director of Creative Writing*
 Karen Hadley
 Karen A. Mullen
 Glynis Ridley
 Mary I. Rosner
 Susan Ryan, *Director of Graduate Studies*
 Ann Elizabeth Willey, *Director of Undergraduate Studies*
 Bronwyn Williams, *Director of Composition*

Assistant Professors

Aaron Jaffe
 Karen Kopelson
 Erica Lin
 Annette Powell
 Joanna Wolfe

Instructor

Elaine Wise, *Chair of Humanities*

Emeritus/Emerita Faculty

Lucy M. Freibert
 Robert Miller
 Harold E. Richardson
 Mary Ellen Rickey
 Thomas A. Van

Master of Arts in French, Language and Literature

Major Code: FREN
 Degree Code: MA
 Unit: GA
 Department Webpage: <http://modernlanguages.louisville.edu>

Program Information

French faculty seek to give graduate students a working

knowledge of French and knowledge of the place of French in the world.

The Master of Arts in French, Language and Literature requires 30 hours of academic work at the graduate level.

It is possible to complete this program as part of a joint B.A./M.A. program in French. Students may consult with the French advisor to take courses in place of the required courses listed below. Students must complete a minimum of 24 hours at the University of Louisville. It is recommended that students take FRE 611 during their first semester in the program and FRE 699 during their last semester in the program.

As part of their graduate program, students are required to spend at least one month in a French-speaking country. Thanks to the Modern Languages Fund, it is possible for the Department of Classical and Modern Languages to assist students financially so as to make a one-month stay in a French-speaking country a reality. The University of Louisville has a long-standing Work-Exchange Program with the city of Montpellier, France, where students spend a month each summer. As with any requirement, after consultation with the French advisor, it may be possible to find an appropriate substitution for this requirement.

Admission Procedures

Admission is on a rotating basis. Students are asked to present transcripts and to provide two letters of recommendation. The GRE exam is a requirement set by the Graduate School.

Students may begin the program in Fall (preferably), Spring or Summer semesters.

Program Curriculum Requirements

FRE 523	Advanced Communication Skills
FRE 524	Practice and Theory of Translation
FRE 531	Special Topics in Literature and Cultural Studies (taught during the summer by a visiting Modern Languages Fund professor)
FRE 552	French Work Exchange Research or approved substitute
FRE 601	Studies in French Linguistics
FRE 602	Studies in French Culture
FRE 603	Studies in French Media
FRE 604	Studies in French Literature

FRE 611	Teaching and Research Methods in French
FRE 699	Independent Research. This course is envisaged as a capstone course for this program, with opportunities for the professor to evaluate the language skills and information base of individual students.
	Total Credit Hours 30

Accelerated B.A./M.A. Program

Students who wish to pursue a accelerated non-thesis Master's Degree will be allowed to apply up to nine (9) hours of undergraduate coursework taken for graduate credit. An additional twenty-one (21) hours of graduate coursework taken in addition will constitute the minimum number of credit hours for obtaining the non-thesis Master's in the accelerated program. The guidelines for this combined program are as follows:

1. Application forms are available in the Department of Classical and Modern Languages office (Humanities 326) or from the French Advisor. It is strongly recommended that at least one of the supporting letters submitted with the application be from a French faculty member.
2. Students must (A) apply for admission to this program no later than the end of the Junior year (a total of 90 degree applicable hours) and, (B) must have completed French 320, 321, 322 with grades of "B" or better.
3. Application will be reviewed by the French faculty. A 3.35 overall grade point average and acceptable test scores on the GRE will be required for admission to the program.
4. Students may take a maximum of nine (9) hours for graduate credit, which will also apply to the requirements for the baccalaureate degree in French. The nine hours must be from the following list: FRE 523, 524, 531, and 552.
5. Students who enroll in the accelerated program will be non-thesis students and must adhere to all policies pertaining to Graduate Students in the Department of Classical and Modern Languages.

Classical and Modern Languages Departmental Faculty

Professors

Wendy Pfeffer, *Chair*
 Rhonda Buchanan, *Director, Latin American Studies*
 William L. Cunningham
 Alan C. Leidner
 Frank Nuessel
 Sydney Schultze

Associate Professors

Aristofanes Cedeño, *Academic Dean, Governor's Scholars Program*
 Gregory Hutcheson
 Mary Makris
 Manuel Medina
 Regina Roebuck
 Lisa Wagner
 Matthieu Dalle

Assistant Professors

Charles Pooser
 Clare Sullivan

Emeritus/Emerita Faculty

Roy L. Ackerman
 Howard Altman
 David R. Hume
 Hubert Papailler
 Hans Peterson
 Marilyn Schuler

Master of Arts in History

Major Code: HIST
 Degree Code: MA
 Unit: GA
 Department Webpage: <http://www.louisville.edu/a-s/history/>

Program Information

The M.A. program in history provides advanced training in historical investigation, theory, and historiography, preparing students either for further graduate study in history or preparation for work in public history or educational institutions.

The Master of Arts program in history at the University of Louisville provides a flexible yet traditional program with rigorous standards. The program provides two tracks to completion: thesis and non-thesis. The thesis option requires 24 hours of course work, followed by a substantial thesis (6 credit hours). The non-thesis option requires 33 hours of course work capped by either two research papers or two examinations. The breadth and reach of our faculty combined with the structure of the M.A. program encourages a worldwide vision of history. Rather than traditional concentrations in American or European history, M.A. candidates pursue a primary and a secondary area of emphasis in areas of concentration such as the Greater Atlantic World, Greater Mediterranean Basin World, the Asia-Pacific Basin World, and Indian Ocean World. Students find this structure allows flexibility in course scheduling and encourages cross-cultural and interdisciplinary scholarship. Each candidate for the M.A. in History will determine

their major and minor areas of emphasis in consultation with the Director of Graduate Studies. This program of studies normally must be approved by the Graduate Director before the student enrolls for the second semester of work.

Accelerated B.A./M.A.

This program allows history majors to take up to 6 hours of graduate course work which will meet undergraduate degree requirements and be counted toward the hours required for the M.A. Upon completion of the undergraduate degree, students will begin the graduate program and must complete the appropriate number of hours remaining and other requirements for the degree option they select before being certified for the Master of Arts degree in history.

To be considered for admission to the accelerated program, students must:

- have a minimum overall grade point average (GPA) of 3.0 and a history GPA of 3.35. In addition, students must retain a 3.35 GPA (have a B+ in graduate history courses) in history during their senior year to remain in the program.
- Complete an application for admission to the graduate program (including Graduate Records scores and two recommendations) no later than the end of the junior year (application details are described below).

Program Admission Procedure

Applicants with the following credentials are eligible to be considered for unconditional admission to the Master's Program in History.

- a minimum undergraduate GPA of 3.0 on a 4.0 scale
- 21 credit hours in history with a minimum GPA of 3.0
- a combined score of at least 1000 on the Verbal and Quantitative sections of the Graduate Records Examination (GRE)
- at least two letters of recommendation from individuals who can speak to the applicant's academic and/or professional capabilities and potential
- a statement, not to exceed 500 words, addressing the question: "What do you understand as the historian's task and what is your purpose for pursuing an MA in history?"

These credentials must be submitted to the Admissions Office along with a formal application and payment of a \$50 processing fee. The application and credentials will then be forwarded to the History Department for review by the Director of Graduate Studies. No student will be admitted to degree status until all materials required for his or her file have been submitted, and the student meets all other requirements.

In line with Graduate School regulations, the application should be complete no later than thirty days before the first day of classes of the semester in which the applicant plans to enroll.

Applicants hoping to be considered for a Graduate Assistantship or for any other entering fellowship should submit all their application materials by April 1 (not postmarked by April

1). Students may enter the program in the Fall or the Spring semester, but all fellowship and assistantship decisions are made in the spring to take effect in the following academic year.

Conditional Admittance and Non-Degree Status

The department shall admit unconditionally, by act of the Director of Graduate Studies, those students who have a 3.00 on a 4.00 point scale overall grade point average and who meet the other requirements for admission set by the Department. Those students whose overall average is between 2.86 and 2.99 on a 4.00 point scale, and who meet the other requirements for admission, will be accepted conditionally by act of the Director. Those whose average is between 2.50 and 2.85 on a 4.00 point scale, and who meet the other requirements for admission, may be admitted conditionally at the discretion of the Departmental Graduate Committee after an inspection of the student's total record. Applicants whose records are based on a 3.00 grade scale will be judged in equivalency to a 4.00 point grade scale.

The department may admit students to pursue course work with non-degree status by act of the Director of Graduate Studies.

Students with fewer than 21 undergraduate hours in history will be required to take post-baccalaureate undergraduate hours sufficient to raise the total number of undergraduate hours in history to 21. The Director of Graduate Studies will determine which of these courses, if any, may apply to the approved graduate program, but in no case may more than six credit hours apply.

Program Curriculum Requirements: Thesis

Each candidate for the M.A. in History will define areas of major and secondary emphasis in consultation with the Director of Graduate Studies. This program of studies normally must be approved by the Graduate Director before the student enrolls for the second semester of work.

Areas of emphasis are:

- Greater Atlantic World, including Europe, Africa, and the Americas.
- Greater Mediterranean Basin, including Europe, Africa, and the Middle East.
- Asia-Pacific Rim, including South Asia, East Asia, Pacific, and the Americas.
- Western Pacific and Indian Ocean World, including East Asia, South Asia, Africa, and the Middle East.

Candidates for the Master of Arts in History, including those in the accelerated B.A./M.A. program, who have chosen the thesis option must complete the following requirements.

Credit hours – Completion of 30 credit hours including a thesis.

Course Work – 24 hours. 15-18 of these hours must be in the major area of emphasis; 6-9 hours in secondary area of empha-

sis; electives, 0-6 hours. At least 12 hours of the 24 hours of course work must be in 600 level courses with at least 9 of these hours in the major area of emphasis.

Thesis preparation – 6 hours. The thesis must be in the major area of emphasis and must be defended in an oral examination before a committee consisting of the thesis director (chair of committee) and at least two other persons of professorial rank, one of whom must be from a different department, and all three must be members of the graduate faculty. The committee must be approved by the Graduate Director of the History Department and by the Graduate School. If the members of the thesis committee accept the candidate's thesis and if the student fulfilled all other requirements, the student will be certified for the Master of Arts degree in history.

Program Curriculum Requirements: Non-Thesis

Each candidate for the M.A. in History will define areas of major and secondary emphasis in consultation with the Director of Graduate Studies. This program of studies normally must be approved by the Graduate Director before the student enrolls for the second semester of work.

Areas of emphasis are:

- Greater Atlantic World, including Europe, Africa, and the Americas.
- Greater Mediterranean Basin, including Europe, Africa, and the Middle East.
- Asia-Pacific Rim, including South Asia, East Asia, Pacific, and the Americas.
- Western Pacific and Indian Ocean World, including East Asia, South Asia, Africa, and the Middle East.

Candidates for the Master of Arts in History, including those in the accelerated BA/MA program, who have chosen the non-thesis option, have two choices for completion as described below.

Non-Thesis Option 1: Completion of 33 credit hours of course work and two research papers, each 25-35 pages.

Course Work: 18-21 hours must be in the major area of emphasis; 9-12 in the secondary area of emphasis; electives, 0-6. At least 18 hours must be at the 600-level with at least 15 of these hours in the major area of emphasis.

Research papers: One paper will normally be in the major area of emphasis, and one in the minor area. A committee will evaluate the written work and conduct an oral examination on the two papers and the relevant areas of history. The committee will consist of three faculty members, normally the two faculty members who directed the research papers and a third member who will normally be a member of the History Department faculty, but may be from outside the department. The committee must be approved by the Graduate Director. If the members of the committee accept the candidate's work and if the student has fulfilled all other requirements, the student will be certified for the Master of Arts degree in history.

Non-Thesis Option 2: The student must complete 33 credit hours of course work and two written examinations.

Course Work: 18-21 hours must be in the major area of emphasis, 9-12 in the secondary area of emphasis; electives 0-6. At least 18 hours must be at the 600-level with at least 15 of these hours in the major area of emphasis.

Examinations: One examination will be in the major area of emphasis, and one in the minor area. A committee of at least three members will evaluate the written examinations and conduct an oral examination on their content and the relevant areas of history. The committee will consist of three faculty members, normally the two faculty members who administered the examinations and a third member who will normally be a member of the History Department faculty, but may be from outside the department. The committee must be approved by the Graduate Director. If the members of the committee accept the candidate's work and if the student has fulfilled all other requirements, the student will be certified for the Master of Arts degree in history.

For M.A.-level work in certain areas knowledge of one or more foreign languages or knowledge of other specialized research tools may be required.

Students will be allowed to transfer up to 6 hours from outside the University, and with the permission of the Graduate Director, take up to six hours of relevant course work outside the department, within the University.

Academic Policies

Course Load – A normal graduate load in this department will be 9 hours or three courses, and in no case will more than 12 hours or four courses be taken during any one regular semester. The course-load decision will be made by the Director.

M.A. candidates have the option of taking up to 6 hours of course work outside of the Department. Those hours must be directly relevant to the student's academic program, and can be taken only with the consent of the Director of Graduate Studies.

In a student's approved graduate program, no Pass-Fail courses will apply, unless the History Department itself creates Graduate Pass-Fail courses. No more than 6 hours of Directed Studies or Independent Studies (601-602, 501-502) will be allowed in a student's approved program.

Quality of Work

Whenever any student's cumulative quality-point total falls below 3.00, the student will be warned and may be subject to dismissal.

Failure of non-degree students to maintain a 2.00 average will result in termination.

Student Appeals

Student appeals concerning departmental guidelines will be submitted to the Director, who will forward the appeal to the Department's Graduate Committee for decision.

History Departmental Faculty

Professors

Bruce F. Adams
Ann T. Allen
Mark E. Blum
John T. Cumbler, Jr.
Benjamin T. Harrison
Robert B. Kebric
Thomas C. Mackey
Justin A. McCarthy
Lee Shai Weissbach

Associate Professors

John E. McLeod, *Chair*
Blake R. Beattie
Tracy E. K'Meyer
Bruce M. Tyler
Jonathan R. Ziskind

Assistant Professors

Christine T. Ehrick
Wayne E. Lee, *Vice Chair, Graduate Director*
Scott C. Levi
Raphael C. Njoku
Karen E. Spierling

Doctor of Philosophy in Humanities

Major Code: HUM
Degree Code: PHD
Unit: GA
Department Webpage: <http://www.louisville.edu/a-s/humanities/>

Program Admission Procedure

1. Completion of a Master's degree or an equivalent number of graduate credits (30) prior to admission
2. Complete transcripts of undergraduate and graduate work
3. Reports on the Graduate Record Examination (GRE) are required.
4. Submission of three letters of recommendation about the applicant's potential success in a doctoral program.

5. A written statement of intent of no more than a thousand words detailing the applicant's professional goals.

6. All applicants must fulfill the general requirements of the Graduate School

Ph.D. Course Requirements

All doctoral students are expected to complete a minimum of 48 hours beyond the Masters degree distributed as follows.

Core Required Courses	Total credit hours: 21
Chronological Sequence:	Credit Hours: 6
*HUM 661: Humanistic Studies I	3
*HUM 662: Humanistic Studies II	3
Theory and Methods:	Credit Hours: 3
*HUM 609: Interdisciplinary Theory: Arts and Humanities	3
Interdisciplinary Topics Seminars:	Credit Hours: 6
*HUM 671: Interdisciplinary Seminar	3
*HUM 672: Interdisciplinary Seminar	3
Internships:	Credit Hours: 3
*HUM 690: Doctoral Internship	3
Capstone Course:	Credit Hours: 3
*HUM 699: Interdisciplinary Symposium	3

Areas of Concentrations: Total credit hours: 18

1. Aesthetics and Creativity - Hum. 681 Topics in Aesthetics and Creativity

2. Studies in Culture - Hum. 682 Topics in Studies in Culture

Graduate courses housed within departments in the Humanities Division meet the area concentration requirements in the primary and secondary areas of concentration:

Aesthetics and Creativity; and (2) Studies in Culture.

A student in consultation with his/her Supervisory Committee will select courses appropriate to his/her course of study. No more than 12 hours of the 18 hours required in primary and secondary areas of concentration may be taken in one discipline.

Primary Area Credit hours: 12

Creativity and Aesthetics OR Studies in Culture

Secondary Area Credit hours: 6

Creativity and Aesthetics OR Studies in Culture

Dissertation Research: Credit hours: 9

*HUM 700

Complete program credit hours: 48

Students may supplement the minimum of 48 hours with additional coursework in a specific discipline or additional hours for the dissertation.

Master of Arts in Humanities

Major Code: HUM

Degree Code: MA

Unit: GA

Department Webpage: <http://www.louisville.edu/a-s/humanities/>

General Information

The Humanities Division of the College of Arts and Sciences offers three concentrations leading to the degree of Master of Arts. Procedures and standards of admission to the degree program are given in the General Information section of this catalog.

For the traditional concentration, the applicant will be expected to have an undergraduate background of some depth in at least two of the following disciplines: art history, literature, classical and modern languages, linguistics, music history, philosophy, theatre arts, and religious studies, or in one of the following interdisciplinary cultural studies periods: ancient, medieval-renaissance, early modern (17th and 18th centuries) or modern. Those who do not meet this requirement will be required to take undergraduate courses before admission is granted.

For the concentration in Humanities and Civic Leadership, the applicant will be expected to have worked in a profession for five years (unless the applicant has completed another graduate or professional degree program or is enrolled in the Joint JD/MAHUM program). Scores from the GMAT, LSAT, MCAT, or other professional examination may be substituted for the GRE General Test. A 1000-word Statement of Intent must be submitted to the Humanities Graduate Advisor before the applicant will be considered for admission.

For the concentration in Linguistics and the Humanities, which is a non-thesis option with a focus on the study of language, the applicant should have an undergraduate background which includes courses in linguistics. The second discipline or area of emphasis will be approved by the Graduate Advisor.

Traditional M.A. Concentration (thesis option or non-thesis option):

1. A total minimum of 30 semester hours as follows:

- 12-15 semester hours in one of the following areas: art history, literature, classical and modern languages, music history, philosophy, theatre arts, religious studies, ancient studies, medieval-renaissance studies, early modern (17th and 18th century) studies, or modern studies;
- 3 semester hours in methodology (HUM 609 or 610 or appropriate substitute approved by the chair);
- 6 semester hours in Thesis Guidance (HUM 645 A-F) or three semester hours in directed study project;
- 9-12 semester hours in second discipline/area.

2. A minimum of 15 semester hours must be in courses at the 600 level, excluding thesis hours or directed study hours.

3. Students who do not have one of the Humanities 591-596 sequence in their undergraduate record will be required to take one of these as part of their electives.

4. Pass a competency exam in French, German, or an approved alternate foreign language.

5. An oral examination covering the content of the thesis.

Traditional MA with Thesis	Traditional MA: Non Thesis
(minimum of 30 hours)	(minimum of 30 hours)
12-15 hours in 1 discipline/area	12-15 hours in 1 discipline/area
9-12 hours in 2nd discipline/area	9-12 hours in 2nd discipline/area
3 hours in Methods	3 hours in Methods
6 hours in Thesis	
Foreign Language Competency**	Foreign Language Competency**
Example:	Example:
12 hours in Philosophy	15 hours in Philosophy
9 hours in Art History	9 hours in Literature
3 hours of HUM 510/610	3 hours of HUM 609
6 hours of thesis	3 hours of Directed Study project
Foreign Language Competency**	Foreign Language Competency**

Concentration in Humanities and Civic Leadership: non-thesis* (minimum of 30 hours):

1. 12 hours in one discipline/area
2. 3 hours in Methods (609 or 610)
3. 3 hours in second discipline/area
4. 6 hours in Internship (650)
5. 3 hours Direct Study Project (655)
6. 3 hours in Interdisciplinary Seminar in Humanities and Civic Leadership (636)
7. No foreign language requirement.
8. Demonstrated writing proficiency is required for admission.

*This program is also offered for a dual degree with the Law School (JD/MAHUM).

Concentration in Linguistics and the Humanities: non-thesis (minimum of 30 hours)

1. 15 credit hours of Linguistic coursework, three hours in each of the 5 areas:

- Introduction to Linguistics: Required
LING 518 Foundations of Language
- Language and Culture: Choose 1
ENG 523 History of the English Language
LING 621 Sociolinguistics
LING 623 Culture as the Basis of Foreign Language Teaching
LING 630 Language and Culture
- Language and Structure
ENG 522 Structure of Modern American English
LING 535 Applied Linguistics for English Teachers
LING 603 Syntax
LING 606 Historical and Comparative Linguistics
LING 610 Phonetics and Phonology
- Language and Cognition: Choose 1
LING 524 Psycholinguistics
LING 622 Psychology of Second Language Learning and Teaching
LING 624 Language and Cognition
LING 641 Recent Philosophy of Language
- Any 500-600 level elective course in Linguistics, not already chosen: Choose 1
LING 521 Teaching Techniques in Foreign Language
LING 590 Special Topics in Linguistics
LING 600 Independent Study
LING 605 Summer Workshop for Foreign Language Teachers
LING 620 Special Topics in Foreign Language Education
LING 625 The Teaching of English as a Second Language
LING 690 Seminar in Linguistics

2. 9 credit hours in a second humanities discipline or area

3. 3 credit hours in methodology: Humanities 609 or 610

4. 3 credit hours in Directed Study Project: Humanities 655

5. Foreign Language Competency

6. An Oral Examination will cover the contents of the Directed Study Project

7. A minimum of 15 semester hours must be in courses at the 600 level, excluding HUM 655, The Directed Study Project.

For students who are pursuing an ESL (English as a Second Language) Endorsement, the above M.A. Concentration allows ESL endorsement coursework to count toward the degree. For more information on the ESL endorsement requirements, see www.louisville.edu/a-s/iesl/Endorsement

Accelerated B.A./M.A. in Humanities

Students who wish to pursue an accelerated Masters degree, will be allowed to apply to the Baccalaureate degree up to 9 hours of coursework taken for graduate credit. Twenty-one (21) hours of graduate coursework in addition will constitute the minimum number of credit hours for obtaining the M.A. The guidelines for the Accelerated (B.A./M.A. in Humanities) are as follows:

1. Students must apply no later than the end of the junior year for admission to the accelerated program.

2. A minimum overall grade point average and major grade point average of 3.35 will be required for admission to and for retention in the program.

3. Student must complete the GRE and fill out the Humanities Division application for the accelerated B.A./M.A. in Humanities.

4. Student may take a maximum of 9 hours for graduate credit, which will also apply to the requirements for the baccalaureate degree in Humanities.

5. The accelerated B.A./M.A. in Humanities will be offered for the Traditional Concentration and for the Linguistics Concentration, but not for the Concentration in Humanities and Civic Leadership.

6. Students who enroll in the accelerated B.A./M.A. in Humanities may elect the thesis option or non-thesis option, which ever is appropriate to the concentration and course of study.

7. All students in the program will take either HUM 609 or HUM 610 to fulfill the "theory requirement".

8. All of the requirements remain the same, including the foreign language requirement.

Humanities Departmental Faculty

Professors

Thomas B. Byers
 John H. Flodstrom
 Melvin E. Greer
 Riffat Hassan
 Thomas S. Maloney
 Dismas A. Masolo
 Karen Mullen
 Frank Nuessel
 Robert St. Clair
 Arthur J. Slavin
 Osborne P. Wiggins, Jr.

Associate Professors

Annette Allen
 Charles F. Breslin
 Robert H. Kimball
 Nancy Potter
 Mary Ann Stenger

Assistant Professors

Elaine O. Wise, *Chair*
 Avery Kolors

Doctor of Philosophy in Applied and Industrial Mathematics

Major Code: MATH
 Degree Code: PHD
 Unit: GA
 Department Webpage: <http://www.math.louisville.edu/graduate/index.html>

Departmental Ph.D. Requirements

All students admitted to the program must complete the following or their equivalent:

A. Core Courses - 24 semester hours

1. Two sequences, each of six (6) semester hours, chosen from:
 - Algebra MATH 621-622
 - Combinatorics MATH 681-682
 - Real Analysis MATH 601-602
2. Two sequences, each of six (6) semester hours, chosen from:
 - Applied Statistics MATH 665-667
 - Mathematical Modeling MATH 635-636
 - Probability & Mathematical Statistics MATH 660-662

Additional Topics and Area of Specialization - 18 semester hours: In addition to the core, an application area of 18 hours will be required. The courses may be in a department outside Mathematics. They will be chosen in consultation with the student's advisory committee.

Qualifying Examinations: Students must pass three written examinations. Two of these will be chosen from the areas Algebra, Combinatorics and Real Analysis. The third will be chosen from the areas of Applied Statistics, Mathematical Modeling and Probability & Mathematical Statistics. Normally, these will be taken within a year of completion of the core coursework. These examinations need not be taken together and each may be attempted at most twice.

Industrial Internship – six (6) semester hours: Each student, with prior approval of the Graduate Studies Director and the Industrial Internship Director, has to complete at least six (6) hours of an internship in an appropriate industrial or governmental setting, or have equivalent experience.

Computing Project: Each student must complete an approved computer project related to the student's area of concentration.

Candidacy Examination: Each student must pass an oral examination in the chosen area of concentration. Usually, at most two attempts at passing this examination will be permitted. Students who wish to make a third attempt must petition the Graduate Studies Committee of the department for permissions to do so.

Dissertation – 18 to 24 semester hours: A doctoral dissertation is required of each student.

Dual Degree Program in Applied and Industrial Mathematics and Biostatistics - Decision Science

Dual degrees in Biostatistics-Decision Science and Applied and Industrial Mathematics are offered by the College of Arts and Sciences and the School of Public Health and Information Sciences. Upon completion of the program, students will receive a Ph.D. in Applied and Industrial Mathematics and an M.S.P.H. in Biostatistics-Decision Science.

Application Procedure

To be admitted to the program, the student is required to apply to and be accepted by both the Department of Mathematics and the Biostatistics-Decision Science Program. A student seeking admission into this program must submit letters to both the Department of Mathematics and the Department of Bioinformatics and Biostatistics stating the intent to take advantage of the dual degree program, and stating whether the student is interested in the Biostatistics or the Decision Science concentration. Students must submit 2 recent letters of recommendation with their letter of intent. Applicants will receive written notification stating whether their admission request has been approved or disapproved.

Degree Requirements

Required Courses

The required courses for the dual degree program consist of all non-overlapping core courses for both the Ph.D. in Applied and Industrial Mathematics and the M.S.P.H. in Biostatistics - Decision Science, as well as the requirements for either the Decision Science or Biostatistics concentration within the Biostatistics-Decision Science program.

Core course requirements for the Ph.D. in Applied and Industrial Mathematics (24 semester hours).

Two sequences, each of six (6) semester hours, chosen from

- Algebra - Mathematics 621 and 622
- Combinatorics - Mathematics 681 and 682
- Real Analysis - Mathematics 601 and 602

Two sequences, each of six (6) semester hours, chosen from

- Mathematical Modeling - Mathematics 635 and 636
- Applied Statistics - Mathematics 665 and 667
- Probability and Mathematical Statistics - Mathematics 660 and 662

Courses taken in requirement of the mathematics component of the dual degree program can be used to satisfy the 6 to 9 semester hours of electives required for the M.S.P.H. in Biostatistics-Decision Science.

Core course requirements derived from the M.S.P.H. in Biostatistics-Decision Science (12 to 18 semester hours).

The following courses are required for both tracks.

- Introduction to Public Health and Epidemiology - PHEP 511 (3 semester hours)
- Social and Behavioral Sciences in Health Care - PHCI 631 (2 semester hours)
- Introduction to Environmental Health
- Health Economics
- Biostatistics-Decision Science Seminar - PHDA 602 (4 semester hours)
- Probability and Mathematical Statistics - PHST 661 and 662 (6 semester hours)*
- * This requirement is waived if the student takes the Mathematics 660, 662 sequence listed above.

Requirements from one of the two possible concentrations for the M.S.P.H. in Biostatistics - Decision Science. (5 to 6 hours)

Biostatistics Concentration Requirements:

- Biostatistical Methods I and II - PHDA 680 and 681 (6 semester hours)
- Decision Science Concentration Requirements:
- Ethical Issues in Decision Making - PHDA 605 (2 semester hours)
- Decision Analysis - PHDA 663 (3 semester hours)

Courses taken to satisfy the Biostatistics-Decision Science component of the dual degree program can be applied to the 18 semester hours of electives which are required for the Ph.D. in Applied and Industrial Mathematics.

Combined Industrial Internship, Practicum and Masters Thesis. (6-8 semester hours)

The Industrial Internship required by the Department of Mathematics, and the Public Health Practicum and Masters thesis required for the M.S.P.H. can be satisfied by a single internship and technical report which simultaneously satisfies the requirements for both degrees. Specifically, the internship must both focus on public health so that it satisfies the Public Health Practicum (PHDA 603 and PHDA 604), and contain advanced mathematical content, so that it satisfies the Ph.D.-level Industrial Internship (Math 694). Likewise, the technical report must meet two requirements: it must satisfy the requirements for a Master's thesis for the M.S.P.H. degree (PHDA 666) and it must be written at an advanced mathematical level expected for the Ph.D.-level Industrial Internship. The six (6) to eight (8) semester hours of the internship will be divided evenly between the Department of Mathematics and the Biostatistics-Decision Science Program.

Dissertation and Qualifying Examinations

In order for the student to fulfill the Ph.D. requirements, the student must satisfy both the qualifying examination and dissertation requirements for the Ph.D. in Applied and Industrial Mathematics. Failure to complete these requirements will not jeopardize the M.S.P.H. degree, if all its requirements have been satisfactorily completed.

Special Considerations: Students who have already completed a Master's degree in the Department of Mathematics

To preserve the spirit of a dual degree, such students need to complete 36 semester hours of courses as required for the M.S.P.H. in Biostatistics-Decision Science. Six (6) semester hours from the previous Master's degree coursework can be applied to this requirement. The remaining semester hours must be chosen from the list of not covered by core courses approved electives for the Department of Bioinformatics and Biostatistics, with preference given to courses in the Departments of Mathematics and Bioinformatics and Biostatistics. Combined Industrial Internship, Practicum and Masters Thesis This cannot be replaced by a previous Master's thesis. This requirement must be satisfied to meet the specifications of both departments.

Master of Arts in Mathematics

Major Code: MATH

Degree Code: MA

Unit: GA

Department Webpage: <http://www.math.louisville.edu/graduate/index.html>

General Information

Prerequisites:

Undergraduate coursework equivalent to a major in mathematics from an accredited university. This should include a one-year course in either analysis or abstract algebra, equivalent to Mathematics 501-502 and 521-522 at the University of Louisville. Candidates who have not taken both must complete the second in their M.A. program.

Degree Requirements:

1. Candidates must complete a program of study approved by the department. All courses (up to a maximum of 12 semester hours) to be taken outside the Department of Mathematics must have prior departmental approval.
2. All students must complete a minimum of 30 semester hours of non-thesis graduate credit, including at least 15 semester hours in the Department of Mathematics, with one full-year sequence, in courses numbered 601 through 689.
3. Students must satisfy one of the following three requirements:

(Master's Level Examination Option): Pass written examinations in three areas of mathematics chosen from a list prepared by the department. At most two attempts are allowed. Examinations will be approved and administered by the departmental Graduate Studies Committee.

(Thesis Option): Write a thesis on an advanced topic in the mathematical sciences. A total of two full-year sequences among courses numbered 601 through 689 must be completed.

(Ph.D. Qualifier Option): Pass two qualifier examinations for the departmental Ph.D. Program. These examinations need not be taken together and each may be attempted at most twice.

4. Students choosing the Thesis Option must pass a final oral examination described under "Requirements for the Master's Degree" in the General Information section of the Graduate School Catalog.

Accelerated M.A. Option in Mathematics

Students who wish to pursue an accelerated M.A. may apply up to nine (9) hours of coursework taken for graduate credit to the requirements for their baccalaureate degree. Students must apply for admission to the program no later than the end of the junior year and must have completed MATH 205, 206, 301, and 325, or equivalent courses, prior to application.

Applicants must have a minimum overall GPA of 3.5, and a minimum GPA of 3.66 in mathematics courses. As part of the combined degree, students must complete MATH 405 and at least four (4) of the following: MATH 501, 502, 521, 522, 561, 562, or 581, including at least one sequence from among these courses.

The student may take a maximum of nine (9) hours for graduate credit, which will also apply to the requirements for the baccalaureate degree in Mathematics. All 600-level courses numbered 689 or below qualify, as do 500-level courses, when completed in accord with the stipulations for graduate credit outlined in the syllabus.

Mathematics Departmental Faculty

Professors

Thomas Riedel, *Chair*
 George R. Barnes
 Patricia B. Cerrito
 Udayan B. Darji
 Andre Kezdy, *Graduate Advisor*
 Ewa Kubicka
 Grzegorz Kubicki
 Lee Larson
 Robert Powers
 Prasanna Sahoo, *Director of Graduate Studies*
 W. Wiley Williams

Associate Professors

Mary E. Bradley
 Manabendra Das
 Bingtuan Li
 Gregory Rempala
 Steven Seif
 Wei-Bin Zeng

Assistant Professors

Lee Gibson
 Ryan S. Gill
 Jon-Lark Kim
 Kiscop Lee
 Alica Miller
 Adjunct Professors
 Chakram S. Jayanthi
 Shi-Yu Wu

Emeritus/Emerita

Richard M. Davitt
 Roger H. Geeslin
 Thomas M. Jenkins
 Lael F. Kinch
 Robert B. McFadden
 Lois K. Pedigo
 Leland L. Scott
 William H. Spragens

Master of Arts in Pan-African Studies

Major Code: PAS

Degree Code: MA

Unit: GA

Department Webpage: <http://www.louisville.edu/a-s/pas/>

General Information

The Pan-African Studies Department offers courses that may be applied toward graduate degrees in other areas. Students must obtain their program advisor's permission before enrolling in these courses. Students who are interested in more information on these courses should contact the Chair of the Department.

Program Admission Information

Students applying for admission to the Master of Arts in Pan-African Studies program must meet the following standards:

- a minimum 2.75 undergraduate cumulative grade point average;
- the submission of an official transcript reflecting previous degree earned;
- at least two letters of recommendation;
- a combined score of a least 900 on the Graduate Record Examination; and
- the submission of a personal statement and CV

Thesis Option

Core Courses 15

- PAS 601: Graduate Research Methods
- PAS 602: Theories and Issues in Pan-African Studies

Nine (9) credit hours of PAS courses for graduate credit distributed as follows:

- Three (3) credit hours in Historical Studies;
- Three (3) credit hours in Cultural Studies; and
- Three (3) credit hours in Social Studies.

Concentration Areas:

African American Studies 12

Nine (9) credit hours of PAS courses for graduate credit focusing on African Americans distributed as follows:

- Three (3) credit hours in Historical Studies;
- Three (3) credit hours in Cultural Studies; and
- Three (3) credit hours in Social Studies.

Three (3) credit hours in any PAS area focusing on African Americans.

OR

African and Diaspora Studies 12

Nine (9) credit hours of PAS courses for graduate credit focusing on Africa and/or the Diaspora, distributed as follows:

- Three (3) credit hours in Historical Studies;
- Three (3) credit hours in Cultural Studies; and
- Three (3) credit hours in Social Studies.

Three (3) credit hours in any PAS area focusing on Africa and/or the Diaspora.

Thesis: PAS 604 3

Elective in Related Field (with advisor's approval) 3

Minimum Total 33

Examination Option

Core Courses 15

PAS 601: Graduate Research Methods

PAS 602: Theories and Issues in Pan-African Studies

Nine (9) credit hours of PAS courses for graduate credit distributed as follows:

- Three (3) credit hours in Historical Studies;
- Three (3) credit hours in Cultural Studies; and
- Three (3) credit hours in Social Studies.

Concentration Areas:

African American Studies 12

Nine (9) credit hours of PAS courses for graduate credit focusing on African Americans distributed as follows:

- Three (3) credit hours in Historical Studies;
- Three (3) credit hours in Cultural Studies; and
- Three (3) credit hours in Social Studies.

Three (3) credit hours in any PAS area focusing on African Americans.

Or

African and Diaspora Studies 12

Nine (9) credit hours of PAS courses for graduate credit focusing on Africa and/or the Diaspora, distributed as follows:

- Three (3) credit hours in Historical Studies;
- Three (3) credit hours in Cultural Studies; and
- Three (3) credit hours in Social Studies.

Three (3) credit hours in any PAS area focusing on Africa and/or the Diaspora.

Electives in Related Fields (with advisor's approval) 6

Minimum Total 33

Note: Satisfactory completion of a comprehensive examination will be required of all students who do not complete a thesis.

Contact Information:

Department Chair:

Dr. Ricky Jones
Email: rljone01@louisville.edu

Director of Graduate Studies:

Dr. Theresa Rajack-Talley
Email: tatall01@louisville.edu
Phone: 502-852-5985
Fax: 502-852-5954

Certificate in Pan-African Studies

Admission

Admission to the graduate certificate in Pan-African Studies is open, potentially, to any student who has completed at a minimum. Post-baccalaureate students wishing to pursue the certificate outside the framework of a graduate degree program must apply for admission through and meet the general requirements for admission to the Graduate School. These requirements include the submission of:

- an official transcript reflecting previous degrees earned;
- at least two letters of recommendation; and
- scores on the General Test Section of the Graduate Record Examination.

If resource limitations necessitate the imposition of restrictions, the PAS Graduate Programs Committee will select students based on the following criteria: 1) undergraduate record; 2) letters of recommendation; 3) personal interview; and 4) GRE scores.

Graduate students wishing to pursue the certificate program in Pan-African Studies in conjunction with a graduate degree must meet the requirements for admission to that degree program and should then apply for the certificate program by consulting the PAS Director of Graduate Studies after admission. Depending on the structure of the degree program, coursework toward the certificate may be either additional hours beyond those required for the degree or elective hours toward the degree, or a combination of the two. The PAS Director of Graduate Studies shall then inform the student's degree program chair and work to coordinate the completion of degree and graduate certificate program requirements.

Exceptions

Exceptions to these standards are not anticipated. However, a "Graduate Programs Committee" (comprised of three PAS faculty, one representative from the College of Education and Human Development and one from another Arts and Sciences department) will be responsible for dealing with exceptional cases as they arise.

Responsibility

The Department of Pan-African Studies Director of Graduate Studies will review and evaluate each applicant's qualifications for admission and make recommendations to the Chair. The Graduate Programs Committee referenced above will be convened only to review exceptional cases.

Requirements for the Certificate in Pan-African Studies

A total of fifteen (15) hours in courses approved for graduate credit in accordance with the policies of the Graduate School.

Nine (9) credit hours must be chosen from the list of "Approved PAS Courses" (available in the Department of Pan-African Studies): three (3) credit hours from the "Historical Studies" area; three (3) credit hours from the "Cultural Studies" area; and three (3) credit hours from the "Social Studies" area. Substitutions must be approved by the Director of Graduate Studies.

Six (6) credit hours must be chosen from the list of "Approved Electives" (available in the Department of Pan-African Studies"). For students pursuing graduate degrees, at least one course must be outside of the department in which the student is pursuing the degree. Substitutions must be approved by the Director of Graduate Studies.

At least three hours must be at the 600 level.

A single course may satisfy more than one of these requirements.

Course work toward the graduate certificate in Pan-African Studies may also count toward the student's graduate degree.

Note: Students may not apply 500-level courses taken for undergraduate credit.

Contact Information:

Department Chair:

Dr. Ricky Jones
Email: rljone01@louisville.edu

Director of Graduate Studies:

Dr. Theresa Rajack-Talley
Email: tatall01@louisville.edu
Phone: 502-852-5985
Fax: 502-852-5954

Pan-African Studies Departmental Faculty

Professors

J. Blaine Hudson, *Dean, College of Arts and Sciences*
Robert L. Douglas

Associate Professors

Ricky L. Jones, *Chair*
Lateef O. Badru
Mary E. Bani
Joy G. Carew
Yvonne V. Jones
Theresa A. Rajack-Talley, *Director of Graduate Studies*

Assistant Professors

Tomarra Adams
Denise Martin
Raphael Njoku
William Tkweme

Doctor of Philosophy in Physics

Major Code: PHYS
Degree Code: PHD
Unit: GA
Department Webpage: <http://www.physics.louisville.edu/>

General Information

Doctor of Philosophy in Chemistry/Chemical Physics

Students in certain research areas may pursue the Ph.D. in Chemistry in the area of Chemical Physics. Contact the Chair of the Department of Chemistry or the Chair of the Department of Physics for details.

Doctor of Philosophy in Applied and Industrial Mathematics

Students in certain research areas may pursue the Ph.D. in Applied and Industrial Mathematics in the area of Mathematical Physics. Contact the Chair of the Department of Mathematics or the Chair of the Department of Physics for details.

Joint Doctoral Program

The Department also participates in a joint doctoral program with the Department of Physics and Astronomy of the University of Kentucky leading to a Ph.D. in Physics from the University of Kentucky. Contact the Chair of either department for details.

Master of Science in Physics

Major Code: PHYS
Degree Code: MS
Unit: GA
Department Webpage: <http://www.physics.louisville.edu/>

General Information

The Master of Science degree in Physics will prepare students for Ph.D.-level graduate work in Physics or a related field, or for a science related career.

The MS is a two-year degree program available to qualified individuals possessing a bachelor's degree in Physics from an accredited college or university. Students with a bachelor's degree in other related subjects, e.g. Mathematics, will also be considered. Ph.D. opportunities are available through co-operative programs with the Chemistry and Mathematics departments and the University of Kentucky Physics department (see below for further details).

Qualified students will be considered for Graduate Teaching Assistantships (GTAs). GTAs perform certain undergraduate teaching duties in exchange for a stipend and full tuition remission.

The MS can be earned via a thesis or non-thesis option. The thesis option requires at least six credit hours of research leading to submission of the thesis. Non-thesis students are also encouraged to become involved in research. The details for each option are described below.

Program Admission

Departmental requirements for admission are as follows:

- A baccalaureate degree with at least 24 hours in physics, or the equivalent.
- A minimum quality-point standing of 3.0 (base 4.0) in physics courses.
- Mathematics course work through differential equations. (MATH 405 or equivalent)
- Submission of the Graduate Record Examination scores.
- For general information concerning admission to the Graduate School of the University of Louisville consult the application directions at www.graduate.louisville.edu/app/.

Program Admission Procedure

Admission into the Physics M.S. program is competitive. The application procedure is as follows:

- Submit a completed graduate application to the University of Louisville Office of Graduate Admissions together with the \$50.00 application fee. Applications may be submitted on-line at www.graduate.louisville.edu/app/. Admissions are most commonly accepted to begin their program of studies

in the Fall semester (which starts in late August). However, programs beginning in the Spring semester (which begins in early January) can be arranged. There is no formal application deadline, but early applicants will be given priority. International applicants should allow sufficient time to satisfy visa and immigration formalities.

- Official transcripts from each University or College attended must be submitted to the Office of Graduate Admissions.
- Take the general section of the Graduate Record Examination and arrange for the official score to be sent to the Office of Graduate Admissions.
- Arrange for at least two letters of recommendation to be sent to the Office of Graduate Admissions. These letters should be written by persons familiar with the applicant's academic work. Please use the recommendation form found at www.graduate.louisville.edu/app/.
- All applicants, whose native language is not English, are required to achieve a TOEFL score greater than 213 on the computer based test or greater than 550 on the paper based test. Students holding a bachelors degree from an accredited institution in the United States are exempt from this requirement.

In individual cases, the conditional admission of a student who does not satisfactorily meet the above requirements may be recommended by the department to the Graduate School. If admission is granted, that student will be subject to those conditions specified by the department or Graduate School as being necessary to remedy the conditional admission.

B.S./M.S. 5 Year Accelerated Program

The Department of Physics, in the College of Arts and Sciences, offers a 5 year accelerated program leading to a Bachelor of Science degree and Master of Science degree in Physics.

Requirements for Admission:

- Applicant will apply for admission to the 5-year accelerated program in the second semester of the junior year.
- Applicant will have completed at least 21 credit hours in Physics before applying to the program
- Applicant will have maintained at least a 3.0 GPA in Physics courses and a 3.35 GPA overall.

Once accepted, the student must meet the following requirements:

- Submit a GRE General test score consistent with Graduate School guidelines.
- Take at least nine (9) credit hours in 500-level physics courses for graduate credit. Two of the courses must be PHYS 542 and PHYS 556. Preferably these courses will be taken during the same semester in the student's senior year.
- Maintain a 3.0 GPA.

Program Curriculum Requirements:

General requirements for the M.S. degree are set forth in the General Information section of the graduate catalog. Specific requirements for the M.S. degree in physics are as follows:

Thesis option: (30)

1. Required courses in physics (12 hours):
 - Theoretical Mechanics PHYS 605 (3)
 - Electromagnetic Theory PHYS 611 (3)
 - Quantum Mechanics I & II PHYS 621-622 (6)
2. Physics electives (6-9 hours): courses numbered 500 and above. Courses at 500 level or above which are required for the BA/BS degree will not normally satisfy this requirement.
3. Courses in one minor field (3-9 hours): Mathematics is the usual minor, but another field may be chosen with the approval of the department.
4. Graduate Research and Thesis PHYS 699 (6 hours).
5. At least 21 credit hours at the 600 level or above.

Non-thesis option: (33)

1. Required courses in physics (12 hours):
 - Theoretical Mechanics PHYS 605 (3)
 - Electromagnetic Theory PHYS 611 (3)
 - Quantum Mechanics I & II PHYS 621-622 (6)
2. Physics electives (12 hours): courses numbered 500 and above. Courses at 500 level or above which are required for the BA/BS degree will not normally satisfy this requirement.
3. Courses in one minor field (3-9 hours): Mathematics is the usual minor, but another field may be chosen with the approval of the department.
4. Graduate Research PHYS 699 (0-3 hours).
5. At least 17 credit hours at the 600 level or above.

B.S./M.S. accelerated program:

The non-physics undergraduate requirements of this degree are identical to the standard B.S. in physics.

Undergraduate physics requirements are as follows:

Course	Credit hours
PHYS 298 or 298H	4
PHYS 299 or 299H	4
PHYS 295 or 295H	1
PHYS 296 or 296H	1
PHYS 300	3
PHYS 301	1
PHYS 390 and 450	6
PHYS 460, 541 and 555	9
PHYS 498	3
Total	34

Graduate requirements for the 5-year BS/MS program are identical to the standard MS program (thesis and non-thesis option) except that the physics electives must include PHYS 542 and PHYS 556.

Physics Departmental Faculty

Professors

Joseph S. Chalmers
 Chris L. Davis, *Graduate Program Director*
 Peter W. France
 Chakram S. Jayanthi
 John F. Kielkopf
 Shi-Yu Wu

Associate Professors

David N. Brown, *Acting Chair*
 John C. Morrison

Assistant Professors

William Hoston
 Shudun Liu, *Undergraduate Program Director*
 Gamini Sumanasekera

Adjunct Professors

Peter R. Almond
 Victor K. Henner, *Perm State University (Russia)*
 Akira Isihara
 George Vourvopoulos
 Karl Pitts, *Pacific Northwest Labs*
 Robert Panvini, *Vanderbilt University*

Emeritus Professors

Joel A. Gwinn
 Wei-Feng Huang
 Roger E. Mills
 P. J. Ouseph
 John J. Sinai

Master of Public Administration in Public Administration

Major Code: PADM
 Degree Code: MPA
 Unit: GB
 Department Webpage: <http://supa.louisville.edu/>

General Information

The Master in Public Administration Program at the University of Louisville plays an integral part in the University's urban/metropolitan mission. Through its academic curriculum,

the Program will provide students with a solid foundation in public administration and prepare its graduates for career placement and advancement in a wide variety of settings. The Faculty will also advance the state of knowledge in the field of public administration through its theoretical and applied research. The Program is offered by the School of Urban and Public Affairs in cooperation with the Department of Political Science to achieve broad interdisciplinary preparation.

The Program requires a minimum of 42 credit hours for completion: a core curriculum of 27 hours, including 6 hours of practicum, internship or thesis, and 15 hours from one of the areas of specialization. The core curriculum encompasses studies in organizational theory, budgeting, statistics, public policy, research methods, and human resources management. The M.P.A. program is primarily an evening program. A student can enroll on either a part-time or full-time basis. During the Fall and Spring semesters, courses are typically offered Monday through Thursday, one evening a week, from 5:30 until 8:15 p.m. The program includes faculty from various disciplines and is aimed at providing recent college graduates, public sector practitioners, and persons in related fields with theoretical knowledge as well as practical skills. This mix of theory and applied skills prepares students for careers in the non-profit and public sectors. The degree program is available to qualified individuals possessing a bachelor's degree from an accredited college or university. No specific undergraduate major is required; however, background in political science as well as economics is helpful.

Program Admission Procedures

The procedures for admission into the M.P.A. program are as follows:

1. Submit a completed graduate application to the University of Louisville Office of Graduate Admissions. There is a \$50 application fee (See web <http://graduate.louisville.edu/app/>). Program candidates may be admitted for Fall, Spring or Summer semesters.
2. Official transcripts verifying the receipt of a baccalaureate degree from an accredited institution must be submitted to the Office of Graduate Admissions.
3. The Graduate Record Exam (GRE) is required. An admission decision will not be made without the GRE scores. See web <http://www.gre.org> for further information about the GRE or call 1-800-GRE-CALL (1-800-473-2255).
4. A written personal statement is required. The statement should indicate why the applicant wishes to pursue the M.P.A. degree.
5. Two letters of recommendation are required. Normally, at least one letter should be from someone who can comment about the applicant's academic performance.
6. International applicants are required to take the TOEFL examination if English is not the native language. Applicants who have not scored 550 or higher on the TOEFL (210 or

higher on the computer-based version) may choose to apply to the Intensive English as a Second Language (IESL) Program. Successful completion of this program or passing the Exit Examination in the advanced level of IESL will constitute proof of English proficiency. For information and application forms, write to IESL, University of Louisville, Louisville, KY 40292.

Curriculum Requirements

M.P.A. Core Courses

The core consists of eight required courses, or 27 credits. Six credits of the core consist of a practicum/internship or a thesis.	Semester Hours	Total
PADM 600 Public Administration and Organizational Theory	3	
PADM 601 Statistics for Public Affairs	3	
PADM 602 Applied Research Methods	3	
PADM 603 Policy Analysis and Program Evaluation	3	
PADM 604 Public Budgeting and Finance	3	
PADM 606 Public Policy	3	
PADM 642 Human Resources Management	3	
PADM 682 Practicum/Internship or PADM 695 Thesis	6	
Total from core		27

Elective Courses

Elective course work includes 15 credits in an area of specialization.

Public Policy and Administration Specialization

PADM 605 Strategic Management and Planning	3	
PADM 607 Planning Theory	3	
PADM 608 e-Government	3	
PADM 610 Administrative Law and Process	3	
PADM 611 Financial Management for Public Administration	3	
PADM 620 Intergovernmental Relations	3	

PADM 621 Politics of Urban Development	3	
PADM 623 Comparative Urban Development	3	
PADM 624 Ethics in Public Administration	3	
PADM 625 Advanced Organizational Behavior	3	
PADM 626 Housing and Community Development	3	
PADM 627 Environmental Policy	3	
PADM 640 Urban Economics	3	
PADM 680 Independent Research in Public Administration	1-3	
PADM 683 Topical Seminar in Public Administration	1-3	
PADM 688 Land Use and Planning Law	3	
Total from electives		15

Labor and Public Management Specialization

PADM 605 Strategic Management and Planning	3	
PADM 610 Administrative Law and Process	3	
PADM 624 Ethics in Public Administration	3	
PADM 640 Urban Economics	3	
PADM 644 Collective Bargaining	3	
PADM 647 Arbitration	3	
PADM 648 Mediation and Dispute Resolution	3	
PADM 649 Legal Aspects of Labor Relations	3	
PADM 651 Trade Unions	3	
PADM 652 Equal Opportunity and the Workplace	3	
PADM 654 Special Topics in Worker Management Relations	3	
PADM 680 Independent Research in Public Administration	1-3	
PADM 683 Topical Seminar in Public Administration	1-3	
Total from electives		15

Non-Profit Management Specialization

PADM 605 Strategic Management and Planning	3	
PADM 608 e-Government	3	
PADM 609 Introduction to Non-Profit Management	3	
PADM 610 Administrative Law and Process	3	
PADM 611 Financial Management for Public Administration	3	
PADM 612 Non-Profit Grantsmanship	3	
PADM 620 Intergovernmental Relations	3	
PADM 624 Ethics in Public Administration	3	
PADM 625 Advanced Organization Behavior	3	
PADM 626 Housing and Community Development	3	
PADM 640 Urban Economics	3	
PADM 647 Arbitration	3	
PADM 648 Mediation and Dispute Resolution	3	
PADM 680 Independent Research in Public Administration	1-3	
PADM 683 Topical Seminar in Public Administration	1-3	
POLS 620 Topics in Public Policy	3	
SW 622 Issues in Policy and Service Delivery	3	
Total from electives		15

Electives not listed above may be taken with permission of the Director of the M.P.A. Program.

Departmental Faculty

Professors

Steven G. Koven, *Director*

John I. Gilderbloom

Thomas S. Lyons

Peter B. Meyer

H.V. Savitch

Ronald K. Vogel

Associate Professors

Dewey M. Clayton

Carrie Donald

Wyatt McDowell

Assistant Professors

Jasmine L. Farrier

David M. Simpson

Master of Arts in Political Science

Major Code: POLS

Degree Code: MA

Unit: GA

Department Webpage: <http://www.louisville.edu/a-s/polsci/>

General Information

The Department of Political Science, in the College of Arts and Sciences, offers graduate training leading to the Master of Arts degree. In addition, the Department participates in the Master of Public Administration program and a joint degree program with the Brandeis School of Law.

The M.A. and the M.P.A. are designed to allow a student to pursue a degree either full or part time. Most graduate-level courses are offered in the evening. The M.A. is oriented toward those who wish to pursue advanced training in political science. The M.P.A. is oriented toward those who want an applied job in the public, private, or non-profit sector. For additional information on the M.P.A. program, see the program website.

The Department of Political Science offers a joint M.A./J.D. program in partnership with the Brandeis School of Law. This program allows the student to obtain the M.A. and J.D. degrees in a four-year course of study. For additional information, see the law school website.

The Department of Political Science also offers its undergraduate majors an opportunity to earn both a B.A. (or B.S.) degree and an M.A. degree in five years of study. This program allows students to earn an M.A. degree at an accelerated pace (approximately one calendar year).

Applicants must meet the general requirements for admission to the Graduate School and must submit an application to the Department of Political Science. Applicants should have an undergraduate major in a social science or have sufficient preparation in the social sciences.

Program Admission Procedure

Admission into the M.A. program is competitive. The procedures for admission into the M.A. program are as follows:

1. Submit a completed graduate application to the University of Louisville Admissions Office. Program candidates are admitted in the Fall semester (which begins in late August), in the Spring semester (which begins in mid-January), and in the Summer session (which usually begins in early July). The application deadline (and submission of all application materials) for these terms is 30 days prior to the beginning of the semester. If circumstances prevent an applicant from meeting the deadline, the applicant needs to contact the graduate advisor in the Department of Political Science.

2. Forward official transcripts verifying the receipt of a baccalaureate degree from an accredited institution to the Admissions Office. An applicant must hold a B.A. or B.S. (or foreign equivalent) before admission to the program can be granted. Applicants selected for the program have generally earned a 3.0 undergraduate GPA overall or a 3.2 undergraduate GPA in the last 60 semester hours or the equivalent.

3. Send scores from the Graduate Records Examination (GRE) to the Admissions Office. The GRE is designed to measure general aptitude for graduate study. Applicants selected for the program generally present a combined GRE score of 1000 (Verbal + Quantitative). Provide two letters of recommendation from individuals familiar with the applicant's academic performance. Professional letters from employers are acceptable when substantial time has elapsed since the applicant has attended an academic institution .

4. A written personal statement is required. This statement should detail the applicant's educational and professional experiences and goals and relate these goals to the pursuit of graduate study in political science at the University of Louisville. The statement should be approximately 400-500 words in length.

5. International applicants are required to take the TOEFL examination if English is not the native language. Applicants who have not scored 550 or higher on the TOEFL may choose to apply to the Intensive English as a Second Language (IESL) Program. Successful completion of this program or passing the Exit Examination in the advanced level of IESL will be considered adequate proof of the English proficiency required for course work in the M.A. program. Acceptance to the Intensive English Program does not constitute acceptance to the M.A. program. For information and application forms, write to IESL, University of Louisville, Louisville, KY 40292.

The Department may accept applicants who do not meet these requirements on a conditional basis if sufficient additional evidence of promise of success in the graduate program can be shown. No student will be admitted unconditionally until all materials listed above have been received.

You may apply to the graduate admission's office at the university on-line at <http://graduate.louisville.edu/app/>.

Program Curriculum Requirements

Students are encouraged to take advantage of the unique strengths of the Department of Political Science when planning their course of study. In particular, the Department enjoys strong complements of faculty in two broad areas: International Studies and American Politics.

The International Studies field includes the comparative study of various regions and nations throughout the world as well as the study of relations among nations and other global actors. Areas of faculty expertise include: the politics of Africa, Latin America, the Middle East, East Asia, Europe, and the former Soviet Union, development, political economy, revolution, leadership, environment, civil-military relations, foreign policy, defense and security, international organizations, and international law.

The American Politics field includes the study of the American governmental institutions that formulate public policy and the study of the administration of public policy. Areas of faculty expertise include: the presidency, Congress, the judiciary, federalism, public administration, public law, the electoral process, social policy, housing policy, urban policy, environmental policy, and economic development policy.

There are two options for earning an M.A. in Political Science: Thesis (30 hours) and Non-thesis (36 hours).

Thesis Option	Hours
Core Courses (6 hours total):	
Scope of Political Science (POLS670)	3
Methods of Political Research (POLS671)	3
Three of the following five courses (9 hours total):	
Seminar in Public Policy (POLS619)	3
Seminar in Public Administration (POLS625)	3
Seminar in American Politics (POLS629)	3
Seminar in International Relations (POLS639)	3
Seminar in Comparative Politics (POLS649)	3
Electives* (9 hours total, from Political Science or other departments)	9
Thesis (POLS 699)	6
Non-thesis Option	Hours
Core Courses (6 hours total):	
Scope of Political Science (POLS670)	3
Methods of Political Research (POLS671)	3

Three of the following five courses (9 hours total):	
Seminar in Public Policy (POLS619)	3
Seminar in Public Administration (POLS625)	3
Seminar in American Politics (POLS629)	3
Seminar in International Relations (POLS639)	3
Seminar in Comparative Politics (POLS649)	3
Electives* (18 hours total):	
Political Science electives	6 or more
Electives from other departments	Up to 12
Directed Research (POLS 695)	3

*Up to nine elective hours may be at the 500-level. Up to six hours may be independent study credit.

Political Science Departmental Faculty

Professors

Charles E. Ziegler, *Chair*

David L. Imbroscio

Philip G. Laemmler, *Undergraduate Advisor*

Susan M. Matarese, *Honors Advisor*

Rodger A. Payne, *Grawemeyer Award Director*

Ronald K. Vogel

Okbazghi Yohannes

Associate Professors

Laurie A. Rhodebeck, *Graduate Advisor*

Julie M. Bunck

Dewey M. Clayton

Michael R. Fowler

Assistant Professors

Anne I. Caldwell, *Internship Advisor*

Jasmine I. Farrier, *Pre-law Advisor*

Tricia J. Gray

Shiping Hua

Sherri L. Wallace

Doctor of Philosophy in Clinical Psychology

Major Code: CPSY

Degree Code: PHD

Unit: GA

Department Webpage: <http://www.louisville.edu/a-s/psychology/>

General Information

The mission of the Clinical Psychology Doctoral Program at the University of Louisville is to produce clinical psychologists who exemplify the scientist-practitioner model in the following way: (1) they are competent to conduct and to evaluate psychological research in domains that contribute to the enhancement of the practice of psychology; (2) they are current in their knowledge of both the theoretical underpinnings of clinical research and practice and in the empirically-supported applications of these theories; (3) they are competent in implementing research-supported clinical practice; and (4) they are ethical and professional in their relationships with clients, students, and colleagues.

The Department of Psychological and Brain Sciences, in the College of Arts and Sciences, offers Ph.D. programs in Experimental Psychology and Clinical Psychology. The Department also offers a separate M.A. program in General Psychology.

The Clinical Psychology Ph.D. program usually requires four years of full-time course work and research activities. Each student must also complete a one-year approved internship. Students are required to complete a Master's Research Portfolio. After completion of the Master's portfolio, students write their preliminary examination and then move on to their dissertation work. A dissertation proposal must be defended by September of the year the student is applying for dissertation.

Financial Support for graduate students in the Ph.D. program is available in the form of research assistantships, Graduate School University Fellowships and part-time jobs and placements in laboratories and community service settings. Information regarding these various awards can be obtained from Ms. Carolyn Mask, Graduate Admissions in PBS, Department of Psychological and Brain Sciences.

Program Admission Procedure

1. Clinical and Experimental Ph.D. Programs Application Deadline - December 1
2. Submit completed graduate application to the University of Louisville Admissions Office. There is a \$50 application fee (on-line at <http://graduate.louisville.edu/app/>) or call the Office of Graduate Admissions at 502-852-3101 for more information. Our Ph.D. programs admit students in the Fall semester only which begins in late August.

3. The Graduate Record Examination is required or application will not be acted upon. We only require the general section of the GRE (minimum scores for Verbal and Quantitative must be 550 each). Those for whom English is not their native language must also submit TOEFL scores.

4. Transcripts of your college records from all the schools you have attended must be submitted to the Office of Graduate Admissions. Students must have earned an undergraduate degree from an accredited college or university and have a minimum grade point average of 3.0 for all undergraduate and prior graduate work.

5. Three letters of recommendation from academic sources are required and must be submitted to the Office of Graduate Admissions.

6. Please contact the Psychological and Brain Sciences for our departmental packet. This packet has information we ask the applicant to fill out and return directly to Ms. Carolyn Mask. To request a departmental packet, call 502-852-8272.

7. Although no other material is required, you are invited to submit a statement outlining interests, background, unique experiences, vita, and other information which might be helpful to persons making an admission decision.

8. Only when the application is complete will the Department Review Committee act on the application and inform prospective students of its decision. Usually the last information to be received is the reference letter, so ask your letter writers well in advance of the deadline. Since your application will not be sent to the Department Review Committee until completed, it is imperative that you be sure that all materials are received well in advance of the closing dates. (January 10)

9. In addition to meeting Graduate School requirement for a doctoral degree (see Graduate School catalogue) each student must meet department requirements such as core courses, research exercises, the Preliminary Examination, a thesis or research portfolio, and a dissertation. More detailed information on programs and requirements can be obtained from Ms. Carolyn Mask, Graduate Admissions in PBS, Department of Psychological and Brain Sciences.

Program Curriculum Requirements

The Clinical Psychology Ph.D. curriculum contains 2 basic sets of core courses: department cores and clinical cores. The curriculum closely follows guidelines for accreditation established and maintained by the American Psychological Association's Office of Program Consultation and Accreditation. Students take a two-course assessment sequence, a three-course intervention sequence, courses in psychopathology, personality, legal and ethical issues, and advanced seminars in specific clinical topics.

In addition to the clinical core curriculum, students take basic psychology core courses including a statistics and research methods sequence, behavioral neuroscience, personality, developmental, cognitive, and social psychology. A course on

the History of Psychology is required for students who have not had an equivalent undergraduate course. Students also complete research hours for master's and dissertation research. Three topical seminars are also required.

Department Core:

- 620 Human Learning or 621 Cognitive Processes
- 642 Behavioral Neuroscience
- 670 Advanced Social Psychology
- 661 Advanced Developmental Psychology
- 673 Advanced Personality
- 610 and 611 Advanced Statistics I and II
- 601 History and Systems (waived with an A or B in undergraduate)

Clinical Core:

- 656 Legal and Ethical
- 679 and 680 Assessment I and II
- 683, 684, 697 Interventions I, II, and III
- 693 Interviewing
- 689 Advanced Clinical Psychopathology
- 685 Clinical Practicum

Electives:

Topical seminars are offered to augment the curriculum and allow students more detailed exposure to areas of interest. Recent seminars include: Schizophrenia, Geropsychology, Neuropsychology, and Behavioral Medicine. Students may also, with approval from their mentor and the director of clinical training, take seminars in other departments of the University.

Students entering the program with graduate courses from another program may request that core courses be waived provided the appropriate instructors judge them to be equivalent be of equivalent content.

Doctor of Philosophy in Experimental Psychology

Major Code: EPSY

Degree Code: PHD

Unit: GA

Department Webpage: <http://www.louisville.edu/a-s/psychology/>

General Information

The research-oriented Ph.D. program in Experimental Psychology at the University of Louisville's Department of Psychological and Brain Sciences offers two areas of specialization:

1. Cognitive and Developmental Sciences: Courses and Research in this area focus on: memory, conceptual behavior, problem solving, judgment, decision making, attention, cognitive development, and mathematical models.
2. Perception and Neural Sciences : Courses and Research in this area focus on: perception, sensory systems and neuroscience. Areas of emphasis are in visual and auditory systems.

The Department of Psychological and Brain Sciences, in the College of Arts and Sciences, offers Ph.D. programs in Experimental Psychology and Clinical Psychology. The Department also offers a separate M.A. program in General Psychology.

The Experimental Psychology Ph.D. program requires four years of full-time training in research. All students must complete a general core curriculum, the courses and research experiences specified in their area of concentration, and a dissertation. Equivalence of graduate work in psychology at another institution will be evaluated on an individual basis. Active and continuous involvement in research is essential. To remain in good standing, students must maintain a B average in all courses and demonstrate appropriate progress in research.

Financial Support for graduate students in the Ph.D. program is available in the form of research assistantships, teaching assistantships, Graduate School University Fellowships and part-time jobs and placements in laboratories and community service settings. Information regarding these various awards can be obtained from Ms. Carolyn Mask, Graduate Admissions in PBS, Department of Psychological and Brain Sciences.

Program Admission Procedure

1. Clinical and Experimental Ph.D. Programs Application Deadline – December 1
2. Submit completed graduate application to the University of Louisville Admissions Office. There is a \$50 application fee (on-line at <http://graduate.louisville.edu/app/>) or call the Office of Graduate Admissions at 502-852-3101 for more information. Our Ph.D. programs admit students in the Fall semester only which begins in late August.
3. The Graduate Record Examination is required or application will not be acted upon. We only require the general section of the GRE (minimum scores for Verbal and Quantitative must be 550 each). Those for whom English is not their native language must also submit TOEFL scores.
4. Transcripts of your college records from all the schools you have attended must be submitted to the Admissions Office. Students must have earned an undergraduate degree from an accredited college or university and have a minimum grade point average of 3.0 for all undergraduate and prior graduate work.
5. Three letters of recommendation from academic sources are required and must be submitted to the Office of Graduate Admissions.

6. Please contact the Psychological and Brain Sciences for our departmental packet. This packet has information we ask the applicant to fill out and return directly to Ms. Carolyn Mask. To request a departmental packet, call 502-852-8272.

7. Although no other material is required, you are invited to submit a statement outlining interests, background, unique experiences, vita, and other information which might be helpful to persons making an admission decision.

8. Only when the application is complete will the Department Review Committee act on the application and inform prospective students of its decision. Usually the last information to be received is the reference letter, so ask your letter writers well in advance of the deadline. Since your application will not be sent to the Department Review Committee until completed, it is imperative that you be sure that all materials are received well in advance of the closing dates. (December 1)

9. In addition to meeting Graduate School requirements for a doctoral degree (see Graduate School catalogue) each student must meet department requirements such as core courses, research activities, the Preliminary Examination, a thesis or research portfolio, and a dissertation. More detailed information on programs and requirements can be obtained from Ms. Carolyn Mask, Graduate Admissions in PBS, Department of Psychological and Brain Sciences.

Program Curriculum Requirements

Cognitive and Developmental Sciences

The main focus of the program is training in research through hands on experience working with one or more faculty members. Students often take independent study (Psyc 604/605) to further this. Accomplishments in research are evaluated separately from performance in courses. To remain in good standing, students must maintain a B average in all courses and demonstrate appropriate progress in research. Below is shown a set of core courses that supplements the student's research training:

Students are required to take these two core courses:

- 621 Cognitive Psychology
- 622 Cognitive Developmental Psychology

Students are required to take at least the first two statistics courses and most take the third

- 610 Advanced Statistics I (Fundamentals)
- 611 Advanced Statistics II (Experimental Design and Analysis of Variance)
- 612 Advanced Statistics III (Multivariate)

Students are required to take at least four of the area specialized courses:

- 622 Cognitive Neuropsychology
- 645 Cognitive Neuroscience
- 622 Cognitive Representation & Understanding

- 638 Decision Making and Reasoning
- 622 Language Acquisition
- 622 Social Cognition

Students are required to take at least 3 Cognitive and Developmental Sciences Special Topics (Can be taken in other areas within PBS or other departments in consultation with the Area Coordinator, one can be a fifth area specialized course)

Students must demonstrate computer proficiency, which is certified by the student's mentor.

Perception and Neural Sciences

This area of specialization is designed to train graduate students for research and teaching careers in basic, clinical and applied aspects of the sensation, perception and neuroscience. There is an emphasis on vision and auditory research.

All students must complete a general core curriculum, courses and research experience in their specified area of concentration, and a dissertation. Equivalence of graduate work in psychology at another institution will be evaluated on an individual basis. Active and continuous involvement in research is essential. Accomplishments in research are evaluated separately from performance in courses. To remain in good standing, students must maintain a B average in all courses and demonstrate appropriate progress in research.

All students must complete the following core curriculum before they may apply to take their preliminary exams.

Area A: Two of the following courses

- Psyc 620 Human Learning
- Psyc 621 Cognitive Processes
- Psyc 631 Perception and Sensation
- Psyc 661 Advanced Developmental Psychology
- Psyc 642 Behavioral Neuroscience
- Psyc 670 Advanced Social Psychology

Area B: Students in PNS must take Psyc: 613, 610 and 611; or Psyc 613 and Biol 650

- Psyc 610 Advanced Statistics I
- Psyc 611 Advanced Statistics II
- Psyc 613 Research Methods
- Biol 650 Advanced Biostatistics

Area Core Courses - All Students must take one of the two following courses:

- Psyc 642 Behavioral Neuroscience
- Psyc 643 Principles of Neuroscience

And a total of 5 approved seminars or electives

Students in Vision Science Track

- Psyc 632 Principles of Vision Science
- Psyc 633 Visual Processes
- Psyc 634 Intermediate Vision

Students in Hearing Science Track

- Psyc 646 Principles of Hearing Science I
- Psyc 647 Principles of Hearing Science II
- Approved Hearing Science elective

Students must demonstrate computer proficiency, which is certified by the student's mentor.

Master of Arts in Psychology

Major Code: PSYC

Degree Code: MA

Unit: GA

Department Webpage: <http://www.louisville.edu/a-s/psychology/>

General Information

The Department of Psychological and Brain Sciences offers a Master's Degree in General Psychology. This non-thesis Master's Degree is tailored for students who wish to increase their knowledge of psychological and brain sciences, but who may not have decided on a specific career goal and do not expect to select a career with a research emphasis.

A minimum undergraduate GPA of 3.2 is required for admission. A minimum of 30 hours of graduate courses (courses numbered 500 and up) is required for completion of the degree. Up to 9 credits of 500-level psychology courses *taken as an undergraduate at U of L* may be credited toward the degree. Master's students are required to take 4 of the core content courses (Psych 524; 531; 575 or 673; 581; 585; 621; 632; 633; 634; 642; 643; 661 or 663; 670) and two of the core Statistics, Methods and History courses (Psych 501 and 504). In addition, students must take 4 additional electives. These 12 credits of electives may be taken from outside the Department of Psychological and Brain Sciences or from the following list within the PBS Department (Psych 571; 604; 605; 609; 622; 687). *Psychology 504, 600-level courses and all Electives must have both approvals of the Psychology Department MA Director and individual instructors.*

Program Admission Procedure

Applicants should follow these steps:

1. Follow procedures outlined by the Graduate School
2. Submit a completed graduate application to the University of Louisville Office of Graduate Admissions. There is a \$50 application fee (on-line at <http://graduate.louisville.edu/app/>). Program candidates are admitted in the Fall semester (which begins in late August), and in the Spring semester (which begins in mid-January). The application deadline (for submission of all application materials) for the Fall semester is November 1. The application deadline for the Spring semester is April 1.

3. E-mail or call Ms. Carolyn Mask (852-8272) for Departmental application materials.
4. Official transcripts verifying the receipt of a baccalaureate degree from an accredited institution (including U of L) must be submitted to the Admissions Office.
5. The Graduate Record Exam (GRE) is required.
6. Two letters of recommendation need to be from individuals familiar with the applicant's academic performance. Professional letters from employers are acceptable when substantial time has elapsed since the applicant has attended an academic institution.
7. International applicants are required to take the TOEFL examination if English is not the native language. Applicants who have not scored 550 or higher on the TOEFL may choose to apply to the Intensive English as a Second Language (IESL) Program. Successful completion of this program or passing the Exit Examination in the advanced level of IESL will be considered adequate proof of the English proficiency required for course work in the program. *Acceptance to the Intensive English Program does not constitute acceptance to the M.A. Degree in General Psychology program.* For information and application forms, write to IESL, University of Louisville, Louisville, KY 40292.
8. Currently, the Department of Psychological and Brain Sciences does not provide financial assistance for students in the M.A. Degree in General Psychology program. For information on financial assistance from the University, please go to http://graduate.louisville.edu/request_info/assistance.html

Program Curriculum Requirements

Core Content Courses- *12 credits required (4 courses):*

- Psych 524 Psycholinguistics
- Psych 531 Sensation and Perception
- Psych 575 or 673 Personality
- Psych 585 Abnormal Psychology
- Psych 581 Behavioral Medicine
- Psych 582 Introduction to Clinical Psychology
- Psych 621 Cognitive Psychology
- Psych 632 Visual Science
- Psych 633 Visual Processes
- Psych 634 Intermediate Level Visual Processes
- Psych 642 Behavioral Neuroscience
- Psych 643 Principles of Neuroscience
- Psych 661 or 663 Developmental Psychology/Life Span Developmental
- Psych 670 Social Psychology

Statistics, Methods and History of Psychology Courses - *both required:*

- Psych 501 History of Psychology
- Psych 504 Statistics

Elective Courses- *12 credits required (4 courses):*

Electives at the 500-level or above may be selected from other departments or from Psychology. All electives must be approved by the Psychology Department M.A. Program Director and individual instructors.

Electives within Psychology:

- Psych 571 Special Topics in Psychology
- Psych 604 Independent Study (Readings)
- Psych 605 Independent Study (Research)
- Psych 609 Seminar in Psychology
- Psych 622 Proseminar in Cognitive
- Psych 687 Seminar in Clinical Psychology

Psychological and Brain Sciences Departmental Faculty

Professors

Dennis L. Molfese, *Chair*
 Barbara M. Burns, *Area Head-Ph.D. in Experimental-Cognitive and Developmental Sciences*
 Stephen E. Edgell, *Vice Chair*
 Edward A. Essock
 Richard Lewine, *Director of Clinical Training*
 Suzanne Meeks
 Carolyn B. Mervis
 Robert G. Meyer
 Stanley A. Murrell
 Heywood M. Petry
 Fred Wightman
 Janet Woodruff-Borden

Associate Professors

Paul J. DeMarco
 Zijiang He
 Maureen McCall, *Area Head-Ph.D. in Experimental-Perception and Neural Sciences*
 Tamara Newton
 John R. Pani
 Paul G. Salmon

Assistant Professors

Benjamin Mast
 Edna Ross, *Director - MA Program in General Psychology*
 Barbara Stetson
 Pavel Zahorik

Emeritus/Emerita

Joseph F. Aponte
 John C. Birkimer
 James M. Driscoll
 Samuel Z. Himmelfarb
 Irwin D. Nahinsky
 John A. Robinson
 Richard P. Smith

Master of Arts in Sociology

Major Code: SOCI

Degree Code: MA

Unit: GA

Department Webpage: <http://www.louisville.edu/a-s/soc/>

General Information

Through its use of scientific methods and systematic theory, sociology is the study of diverse social groups as they emerge, persist, and change over time and of human behavior in social settings. Sociologists seek to identify and explain the underlying patterns of social relations. The substantive focus of sociology at the University of Louisville is the study of social dynamics particularly in reference to social diversity.

The faculty of the Department of Sociology at the University of Louisville is committed to being a vibrant, learning-centered faculty that enhances comprehension of social dynamics through creative and inventive research, graduate training, and applied opportunities. The graduate degree in sociology at the University of Louisville prepares students for continued advanced study and for careers in government, nonprofits, and the private sector.

Our mission is to provide master's level graduate education at the highest standards. We will introduce students to the current state of sociological knowledge and methods through high-quality classroom instruction, faculty-student collaboration, and independent student research and practical learning opportunities.

This mission of graduate education in the Department of Sociology further encourages students to develop and apply a "sociological imagination" in the systematic analysis of all things social. The Department advances the use of the sociological approach in interpreting the causes and consequences of human social behavior, facilitating critical appraisal of social structures and cultures, and assessing public policy.

In addition, the Department pledges to conduct this mission in a climate of fairness, sensitivity to the merits of diverse lifestyles, and appreciation for all manners of social research.

The Department of Sociology, in the College of Arts and Sciences, offers graduate training leading to the Master of Arts.

The M.A. program is designed to allow a student to pursue a degree either full- or part-time. Many courses are offered in the evening so that those employed full-time can also pursue graduate education. Full-time students can normally complete the program in two years; those who are employed full-time typically require three years to complete the program.

The program is designed to fill the needs of students wishing to pursue the Ph.D. in sociology as well as those who are planning careers in the public or nonprofit sectors. The program

also provides skills for those seeking employment in private research firms or in the field of information technology and program evaluation.

This program offers both thesis and non-thesis options (practicum or examination). Please contact the Department for specific information.

The areas of specialty of the graduate faculty include: quantitative and qualitative methodology, social theory, criminology/delinquency, education, medical sociology, and work and labor markets.

In addition to the traditional M.A. in sociology, the Department also offers a M.A. in sociology with a concentration in Communications, Urban Geography, or Pan-African Studies. These concentrations are offered in conjunction with their respective departments. For further information concerning these programs, contact the Sociology Department and/or the department of concentration interest.

Program Admission Procedure

Applicants must submit to the Office of Graduate Admissions: a graduate application; official copies of transcripts from all colleges attended; two letters of recommendation, preferably from current or former instructors; Graduate Record Examination (GRE) scores; and TOEFL scores (for international students). Applicants must also submit to the Department of Sociology a "Sociology Department Graduate Admissions Questionnaire" available from the Department or online at <http://www.louisville.edu/a-s/soc/grad%20qstnaire.html>

Those applying to the M.A. program must have: a minimum undergraduate GPA of 3.0; a combined verbal/quantitative GRE score of 900; and previous course work in statistics, research methods, and social theory. (Students may be allowed to make up deficiencies in previous course work, but credit for such courses cannot be applied toward graduate degree requirements.) International students should have a quantitative GRE score of 450 and a score of 550 on the paper-based TOEFL or 213 on the computer-based TOEFL.

Graduate Assistantships

The Sociology Department has available annually a limited number of graduate assistantships. Applicants wishing to compete for one of these must submit all materials for admission, including GRE scores, not later than February 1 for the fall semester and October 1 for the spring semester. Announcement of awards is normally made about six weeks after the deadlines.

Enrollment and Program Guidance

The Graduate Program Coordinator serves in an advisory capacity to students for enrollment and program planning until such time as an advisor and/or committee chairperson has been formally designated. At this point the thesis advisor and/or committee chair assumes the primary responsibility for guidance of the student.

Academic Standards

In order to be retained in the program, graduate students must receive a grade of 3.0 or higher in each of the department's core courses and must maintain an overall average of at least 3.0 in all course work taken for graduate credit. Any student whose cumulative quality point total falls to three fewer than three times the number of credits attempted will receive a warning in writing from the Graduate Program Coordinator. Any student whose quality point total falls to six fewer than three times the number of credits attempted shall not be retained in the program.

Program Curriculum Requirements

All students enrolled in the M.A. program in Sociology are required to complete the following core courses:

- SOC 510 Computer Data Analysis 3 credit hours
- SOC 604 Graduate Professional Seminar 1 credit hour
- SOC 610 Seminar in Statistics 3 credit hours
- SOC 615 Seminar in Research Methodology 3 credit hours
- SOC 620 Seminar in Sociological Theory 3 credit hours

In addition to the required core courses, students take the appropriate number of electives corresponding to the completion option chosen. (For students who might want to pursue a Ph.D. or a career in a research-related field, the thesis option is strongly recommended.) The three options have different credit hour requirements.

Option	Core Courses	Elec-tive Hrs	The-sis Hrs	Practi-cum Hrs	Total Hrs
Thesis	13	12	6	-----	31
Practi-cum	13	18	-----	6	37
Examina-tion	13	24	-----	-----	37

No more than six credit hours of 500-level courses may be applied toward the master's degree. Given that all sociology graduate students must take SOC 510 Computer Data Analysis, students are allowed to count one other 500-level course toward the degree.

Up to six credit hours of course work, with approval from the Sociology Department Graduate Coordinator, may be taken outside the Sociology Department. Students may also elect to take up to three credit hours of independent study (independent readings or research). Additional credits of course work outside the department or of independent study counting toward degree requirements require special permission from the Sociology Department Graduate Coordinator.

Five-Year B.A.-B.S./M.A. Program in Sociology

The program is designed to allow motivated undergraduates with a high GPA to earn a B.A./B.A. and a M.A. in sociology in five years. Students apply for the program during their junior year and, if accepted, begin the program in their senior year.

During their senior year, students can take three 600-level Sociology courses or SOC 510 and two 600-level Sociology courses. The credits earned in these courses will meet both undergraduate and graduate degree requirements. Upon completion of the undergraduate degree, students will officially begin the graduate program and take the appropriate number of hours remaining for the degree completion option they select. Students accepted into the program will be eligible to apply for Graduate Assistantships. Assistantships will be awarded for the year following completion of the undergraduate degree.

Admission Requirements: 3.35 overall undergraduate GPA at time of application and a combined total GRE score of 900 on the Verbal and Quantitative sections and a 3.5 GRE score on the Analytical Reasoning section. Applicants are also required to submit two letters of recommendation and a completed Graduate Admission Questionnaire. Students must be admitted to the Graduate School.

Master of Arts in Sociology with Concentration in Communication, Urban Geography, or Pan-African Studies

Students pursuing the Master of Arts in Sociology with Concentration in Communication, Urban Geography, or Pan-African Studies complete the core courses required for the M.A. in Sociology as specified above. In addition to the core courses, they take electives in Sociology and in the chosen area of concentration in relationship to the completion option (thesis, practicum, examination).

Option	Core Hrs	Elective Hrs		Thesis	Practi-cum	Total
		S	Con			
		o	cen			
		c	tra			
		centration				
Thesis	13	0	12	6	-----	31
Practi-cum	13	6	12	-----	6	37
Exami-nation	13	9	15	-----	-----	37

No more than six credit hours of 500-level courses may be applied toward the master's degree. Given that all sociology graduate students must take SOC 510 Computer Data Analysis, students are allowed to count one other 500-level course toward the degree.

Up to six credit hours of course work, with approval from the Sociology Department Graduate Coordinator, may be taken outside the Sociology Department. Students may also elect to take up to three credit hours of independent study (independent readings or research). Additional credits of course work outside the department or of independent study counting toward degree requirements require special permission from the Sociology Department Graduate Coordinator.

Sociology Departmental Faculty

Professors

Jon H. Rieger
Wayne M. Usui
J. Allen Whitt

Associate Professors

L. Allen Furr, *Chair*
D. Mark Austin
Lateef O. Badru
James K. Beggan
John A. Busch
Melissa Evans-Andris, *Coordinator of Graduate Program*
Patricia Gagne
Susan E. Kelly
Cynthia Negrey
Karen Christopher

Assistant Professors

Clarence Talley

Emeritus/Emerita

Badr El-Din Ali
James E. DeBurger
K. Robert Durig

Master of Arts in Spanish

Major Code: SPAN
Degree Code: MA
Unit: GA
Department Webpage: <http://modernlanguages.louisville.edu/>

General Information

The Spanish faculty seeks to prepare students for a global economy, a multicultural community and a changing workplace through the study of language, culture, linguistics, translation, interpretation and Spanish in the workplace.

The Master of Arts in Spanish requires 30 hours of academic work at the graduate level. At least 18 of the 30 hours must be

in courses open to graduate students only (i.e., courses at the 600 level). With the approval of the graduate advisor, candidates may take six hours of electives outside the Spanish program, in courses at the 500 or 600 levels. All students are required to complete and present a directed study project.

Program Admission Procedure

Prerequisite for admission to the Spanish program is the ability to read, comprehend, speak, and write the language. Admission is on a rotating basis. Students are asked to present transcripts and to provide two letters of recommendation. The GRE exam is a requirement set by the Graduate School.

Students may begin the program in Fall (preferably), Spring or Summer semesters.

Program Curriculum Requirements

		Hours
SPAN524	Introduction to Hispanic Linguistics	3
SPAN554	Hispanic Culture through Film and Media	3
SPAN611	Teaching and Research Methods in Spanish	3
SPAN624	Studies in Hispanic Linguistics	3
SPAN634	Spanish for the Workplace and Community	3
SPAN638	Theory and Practice of Translation	3
SPAN644	Origins and Development of Hispanic Culture	3
SPAN648	Contemporary Issues in the Hispanic World	3
SPAN5XX or SPAN6XX	Two electives in Spanish	6
	Total Credit Hours	30

Classical and Modern Languages Departmental Faculty

Professors

Wendy Pfeffer, *Chair*
Rhonda Buchanan, *Director, Latin American Studies*
William L. Cunningham
Alan C. Leidner
Frank Nuessel
Sydney Schultze

Associate Professors

Aristofanes Cedeño, *Academic Dean*,
Governor's Scholars Program
Gregory Hutcheson
Mary Makris
Manuel Medina
Regina Roebuck
Lisa Wagner

Assistant Professors

Mathieu Dalle
Charles Pooser
Clare Sullivan

Emeritus/Emerita

Roy L. Ackerman
Howard Altman
David R. Hume
Hubert Papailler
Hans Peterson
Marilyn Schuler

Master of Fine Arts in Theatre Arts

Major Code: TA
Degree Code: MFA
Unit: GA
Department Webpage: <http://www.louisville.edu/a-s/tas/>

General Information

The Department of Theatre Arts offers a Master of Fine Arts. Concentrations are in Acting/Performance or Design/Production. A Certificate in African American Theatre is also offered. The department fosters creativity, collaboration, discipline, and artistic. It embraces the theatre as a means of creative expression, cultural understanding, and social development. The African American Theatre Program, founded in 1993, is integral to the department. All students are exposed to the diversity of multicultural theatre.

Admission

Prerequisites for admission to the M.F.A. program are a baccalaureate degree from an accredited college or university and admission to the Graduate School. The department requires that a resume of theatrical experience accompany the application.

Unconditional admission requires completion of basic undergraduate course work in each of the following areas: theatre history, dramatic literature, design/technical theatre, acting/directing. To accomplish this purpose, students may be required to take preparatory courses not to be counted toward the degree.

Applicants for admission to the M.F.A. program must demonstrate theatrical skill that indicates their potential for excellence: Students planning to concentrate on Acting/Performance must audition in person (no videotaped auditions are accepted); those wishing to focus on Design/Production must present a portfolio. Most students are also interviewed to determine their level of preparation and commitment.

Admission to the Graduate Certificate in African American Theatre requires a baccalaureate degree from an accredited college or university and admission to the Graduate School. Applicants to this program must have an interview with the Director of Graduate Studies.

Program Curriculum Requirements

Options and Requirements for the M.F.A.

Two options are available to the student in the M.F.A. program. These options place emphasis on Performance (acting), or on Production (including design and technical theatre). These options differ only in the selection of specific skills courses and practical projects undertaken.

Requirements and Procedures: Acting

Students pursuing the M.F.A. in acting must complete 72 semester hours of graduate work. The three-year curriculum consists of the following courses:

- Academic Area (14 credits)
- Graduate Seminar 2
- Script Analysis and Interpretation 3
- Performance Theory 3
- Tools for a Global Theatre 3
- Approaching African American Theatre 3
- Performance Concentration (42 credits)
- Graduate Movement I-IV 12
- Graduate Voice I-IV 12
- Graduate Acting I-V 15
- Actors Theatre of Louisville Workshop 3
- Project Area (10 hours)
- M.F.A. Performance Projects 7
- Thesis Guidance (monograph) 3
- Electives (3 credits) 3
- Community Service in the Arts (3 credits)
- Independent Study 3

Please observe that the sequence of graduate movement and voice classes, as well as the theory sequence, alternate years.

Requirements and Procedures: Design

M.F.A. in Design candidates must complete a minimum of 72 hours of course work and selected design assignments. The Graduate Advisory Committee must approve substitutions for any course. Typical course requirements are as follows:

- Academic Area (11 credits)
- Graduate Seminar 2

- Script Analysis and Interpretation 3
 - Design Theory 3
 - Tools for a Multicultural Theatre 3
 - Area of Concentration (36 credits)
 - Black Aesthetic on Stage 3
 - Scene Design I-II 6
 - Costume Design I-II 6
 - Lighting Design I-II 6
- One of the following: 3
- Life Drawing (Department Fine Arts)
 - Sketching & Rendering: Scenery
 - Sketching & Rendering: Costumes
 - Electives 12
 - Project Area (13 credits)
 - Production Projects (1st and 2nd year) 7
 - Final Project and Thesis 6
 - Professional Internship (9 credits)
 - Internships are approved by the Advisory Committee for the 4th or 5th semester.
 - Community Service in the Arts (3 credits)
 - Independent Study 3

Certificate in African American Theatre (minimum 15 credits)

The CAAT may be undertaken with the MFA degree or may be undertaken as a stand alone program.

- History, Theory, and Literature (6 credits)
 Advanced African American Theatre History 3
 One of the following:
- Approaching African American Theatre 3
 - Advanced African American Women in Theatre 3
 - Advanced Theatre of the African World 3
- Performance/Production (3 credits)
 One of the following:
- Advanced Directing the Black Experience 3
 - Advanced Black Aesthetic on Stage 3
 - Performance Project in an approved play 3
 - Production Project on an approved production 3
- Electives (3 credits)
 One of the following:
- Theatre Internship 3
 - Independent Study on an approved topic 3
 - Approved courses in Pan African Studies 3
- Community Service in the Arts (3 credits)
 Independent Study (3credits)

Academic Policies

Some candidates may enter the program with insufficient knowledge in basic areas that may be important to their future success in the program. These students will be required by their Graduate Advisory Committee to complete additional courses. For example, many students enter without sufficient

knowledge of Theatre History and are then required to take Theatre History during their first year of residence.

Performance/Production Project Requirements

All students enrolled in the M.F.A. Program are expected to be active in performance or production projects during each semester in which they are enrolled. TA 625 (Performance Project) and TA 645 (Production Project) provide a mechanism for implementing this expectation and for assessing the quality of the projects undertaken. The number of credits granted for TA 624/625 varies depending on the student's concentration and year of study.

Theatre Arts Departmental Faculty

Professors

Russell J. Vandenbroucke, *Chair*
 Michael F. Hottos, *Head of Design*
 Albert J. Harris

Associate Professors

Rinda L. Frye
 James R. Tompkins
 Lundeana Thomas, *Director, African American Theatre Program*
 Garry Brown, *Director of Undergraduate Studies*
 Nefertiti Burton, *Director of Graduate Studies*

Instructors

Zhanna Goldentul

Adjunct Faculty

Zan Sawyer-Dailey

Master of Arts in Women's and Gender Studies

Major Code: WGST
 Degree Code: MA
 Unit: GA
 Department Webpage: <http://www.louisville.edu/a-s/ws>

General Information

The WGS M.A. is open to qualified individuals with a bachelor's degree from an accredited college or university. Any undergraduate major is acceptable for admission; however, students without some Women's and Gender Studies background may be required to take preparatory courses before beginning the M.A. curriculum or in addition to the M.A. curriculum.

The 36-hour interdisciplinary degree program is organized around an 18-hour core of two introductory seminars and a selection of courses in four areas. In addition to the core, students complete a concentration area and either a thesis or culminating project. Faculty in the WGS Department, as well as faculty in other departments of the university, offer courses in the M.A. program.

The WGS M.A. may be completed in four semesters (fall/spring). Most courses are offered in late afternoon or evening. Limited summer offerings are also available.

Program Admission Procedure

1. Students must meet the admission criteria established by the UofL Graduate School (submit a complete application, submit official transcripts verifying the receipt of a baccalaureate degree from an accredited institution, and pay application fee.
2. Students must have a 3.0 GPA in undergraduate work. Provisional admission is possible for students who do not meet this requirement.
3. Students must submit two letters of recommendation (submitted to the Graduate School). Letters of recommendation must be current (written within the last year), and members of the WGS Graduate Admissions Committee may not be letter-writers.
4. Students must achieve a combined score of at least 900 on the GRE verbal and quantitative sections. Provisional admission is possible for students with lower scores.
5. Students must submit one academic writing sample of at least five pages (a paper written as part of the requirements of a university or college course), which should be mailed directly to the Department of Women's & Gender Studies). The Graduate Admissions Committee will determine whether the student has the necessary level of competence in written communication to enter the M.A. program.
6. Students must submit a personal statement of 1-2 pages discussing how the M.A. in Women's & Gender Studies relates to the student's professional or personal goals (mail directly to the Department of Women's & Gender Studies).
7. Any undergraduate major is acceptable for admission; however, students without Women's and Gender Studies background may be required to take preparatory courses before beginning the M.A. curriculum or in addition to the M.A. curriculum. This will be determined by the Graduate Admissions Committee.
8. Students must maintain a 3.0 average in order to be in good standing.
9. Up to 6 hours of graduate-level, "A" or "B" work in Women's and Gender Studies done at another institution may be applied toward the student's UofL degree, upon approval of the director.

10. Students enrolled in the UK or WKU graduate certificate programs may transfer up to 12 hours of graduate-level "A" or "B" work, upon approval of the director.

Master of Arts in Women's and Gender Studies Course Requirements

The M.A. curriculum includes 18 hours of core courses; 9 hours in a concentration; a thesis or non-thesis option; and 3-9 hours of electives, depending on whether the thesis is chosen. At least 18 of the 36 hours must be in courses at the 600 level.

Core Curriculum, 18 hours:

Foundation courses:

WGST 601: Feminist Research and Theory in the
(3 hours)

WGST 602: Feminist Research and Theory in the Social Sciences (3 hours)

Women's/Gender History, choose one (3 hours)

WGST 630: Feminism in Western Civilization

WGST 631: Women in Europe and the U.S. in the 20th Century

WGST 633: Women in 19th-Century America

WGST 532: History of Sexualities

WGST 591/691: Topics in WGS [example: Latin American Women]

Gender, Race, and Colonialism, choose one not chosen in another category (3 hours)

WGST 643: Black Women's Voices

WGST 640: Women's Health in Africa

WGST 558: Women and Leadership in Developing Nations

WGST 591, 593, 691, 692: Topics in WGS [example, spring, '05, Southern Women, Black and White]

Humanities Perspectives on Women/Gender, choose one not chosen in another category (3 hours)

WGST 622: The Body in Popular Media

WGST 520: Women's Personal Narratives

WGST 560: Feminist Philosophical Literature

WGST 571: Francophone Women Writers and Critics

WGST 593/WGST 692: Topics in WGS [example, fall, '04, Feminist Theology]

Social Science Perspectives on Women/Gender, choose one not chosen in another category (3 hours)

WGST 656: Feminist Theory

WGST 612: Gender, Race, Work and Welfare

WGST 615: Sociology of Disabilities

WGST 538: American Women in Sports

WGST 535: Women's Health Issues

WGST 643: Black Women's Voices

WGST 640: Women's Health in Africa

WGST 558: Women and Leadership in Developing Nations

WGST 591/691: Topics in WGS

Concentration, 9 hours: For the concentration, students take three courses in a concentration, either around a theme or a more traditional grouping.

Thesis option or non-thesis option, 9 hours:

Thesis option:

In addition to the core and the concentration:

WGST 695: Practicum **or** elective (need not be in WGS), 3 hours

WGST: 699: Thesis, 6 hours

Non-thesis option:

In addition to the core and the concentration:

WGST 695: Practicum or elective (need not be in WGS), 3 hours

WGST elective, 3 hours

WGST 698: Culminating Master's Project

Certificate in Women's and Gender Studies

General Information

The WGS graduate certificate is a 15-hour program for students who have completed a B.S. or B.A. degree in any field. Students with no prior course work in WGS may be required to take classes in preparation for admission to the certificate program.

Program Admission Procedure

Admission to the graduate certificate in Women's & Gender Studies is open to any student who has completed a B.A. or B.S. degree with a 3.0 overall GPA. Students may pursue the

certificate outside the framework of a graduate degree program or in conjunction with a graduate degree program in another UofL department. Students wishing to pursue the certificate must apply for admission through the Graduate School by:

1. completing a Graduate School application form and sending in the application fee
2. submitting an official transcript reflecting previous degrees earned

Students must also send directly to Women's and Gender Studies a 1-2 page letter of intent, describing how the WGS graduate certificate will further their personal or professional goals.

Students wishing to pursue the graduate certificate in conjunction with a graduate degree program in another UofL department should first apply and be admitted to the degree program before applying for admission to the WGS graduate certificate program.

Program Curriculum Requirements

1. Students must complete a total of 15 hours in courses approved for graduate credit in accordance with the policies of the Graduate School, approved by the WGS chairperson.
2. One course among the 15 hours must be WGST 601 or WGST 602.
3. At least two courses must be at the 600-level.
4. Courses must be chosen from both humanities and social sciences disciplines, with consultation of WGS chairperson.
5. Students pursuing the WGS certificate in conjunction with a graduate degree program must take at least one course outside of the department in which the student is pursuing the degree.
6. A single course may satisfy more than one requirement.
7. Course work toward the graduate certificate in WGS may also count toward the student's graduate degree.

Departmental Faculty Women's and Gender Studies

Professors

Nancy M. Theriot, *Chair*

Assistant Professors

Karen Christopher

Cate Fosl

Dawn Heinecken

Tomarra Adams

Anne Braden, *Visiting Lecturer*

Affiliated Faculty

Ann Allen, *Professor, History*
 Beth Boehm, *Associate Professor, English*
 Barbara Burns, *Professor, Psychology*
 Thomas B. Byers, *Professor, English*
 Karen Chandler, *Associate Professor, English*
 Julia Dietrich, *Professor, English*
 Rinda Frye, *Associate Professor, Theatre Arts*
 Patricia Gagne, *Associate Professor, Sociology*
 Alan Golding, *Professor, English*
 Susan Griffin, *Professor, English*
 Karen Hadley, *Associate Professor, English*
 Susan Herlin, *Associate Professor, Emerita,*
 History and Pan African Studies
 Suzette Henke, *Professor, English*
 Mary Hums, *Associate Professor, HPES*
 Eileen John, *Associate Professor, Philosophy*
 Katherine Johnson, *Assistant Professor, University Libraries*
 Susan Kelly, *Associate Professor, Sociology*
 Cheryl Kolander, *Professor, HPES*
 Karen L. Kopelson, *Assistant Professor, English*
 Carol Mattingly, *Associate Professor, English*
 Wendy Pfeffer, *Professor, Classical and Modern Languages*
 Nancy Potter, *Associate Professor, Philosophy*
 Theresa Rajack-Talley, *Assistant Professor, Pan African Studies*
 Sydney Schultze, *Professor, Classical and Modern Languages*
 Edwin S. Segal, *Professor, Anthropology*
 Arthur Slavin, *Professor, Emeritus, Humanities*
 Mary Ann Stenger, *Associate Professor, Humanities*

Doctor of Philosophy in Urban and Public Affairs

Major Code: UPA
 Degree Code: PHD
 Unit: GB
 Department Webpage: <http://supa.louisville.edu>

General Information

The Ph.D. program prepares students for careers as professors, researchers, and public servants in the fields of *Urban Policy and Administration* and *Urban Planning and Development*.

Students are required to complete 48 credit hours of study. This requires a sequence of core courses consisting of 18 credit hours. Students must complete 18 credit hours in an area of specialization including 3 required courses. Two field specializations are offered: *Urban Planning and Development* and *Urban Policy and Administration*. Twelve credit hours of dissertation research are also required. Students must pass qualifying examinations on the core and specialty area before commencing formal dissertation work. Students should consult the Program Guidelines for details.

Admission Requirements

Bachelor's degree with at least a 3.0 GPA (on 4.0 scale);

Master's degree in an appropriate field with at least a 3.5 GPA (on a 4.0 scale);

GRE score of at least 500 Verbal, 500 Quantitative, and 4.5 Analytical.

TOEFL: Those applicants whose native language is not English and who do not hold a degree from a university where the language of instruction is English must also submit scores from the Test of English as a Foreign Language, with a minimum score of 210 on the computer-based test.

Applications must include:

- transcripts from all institutions attended;
- supplemental application (available from School web site);
- at least two letters of recommendation (preferably from professors knowledgeable about your potential to perform doctoral level work).

Part-time Students

The program gives preference to applicants who intend to study full-time and who can be supported with financial aid (a Graduate Research Assistantship or a Fellowship). A few part-time students may be admitted if they can demonstrate they have flexible schedules and can attend daytime courses and fully participate in school functions. The Graduate School requires every PhD student to complete at least one year of full-time study.

Admission Deadlines

Fall Admissions July 15

January 31 to be considered for a University Fellowship

March 1 to be considered for a Graduate Assistantship

Spring Admissions November 15

Students wishing to enter the program in Spring should discuss their situation with the program director or student advisor. The program is designed to be entered in the Fall.

Curriculum Requirements

Doctor of Philosophy in Urban and Public Affairs Course Requirements

The Ph.D. in Urban and Public Affairs consists of 48 credit hours of study including 18 hours of core courses, 18 hours in a field specialization, and 12 hours of dissertation research.

Students with no prior study of statistics are required to take PADM 601/PLAN 602 Statistics for Public Affairs and SOC 510 Computerized Data Analysis prior to enrolling in SOC

610. Students with previous study of basic statistics, but no experience with statistical software, are required to take SOC 510 prior to enrolling in SOC 610. Students with no prior study in economics are recommended to take an introductory course in that subject, such as PLAN 500 Foundations of Economics. These courses do not count toward the 48-semester-hour requirement.

Requirements	Semester Hours	Total
Core Required Courses		
UPA 602 Urban Policy and Governance	3	
UPA 603 Urban Economics	3	
UPA 606 Research Methods	3	
UPA 610 Urban Theory	3	
UPA 621 Policy Analysis and Program Evaluation	3	
SOC 610 Seminar in Statistics	3	
		18
Core Exam		Pass
Field Specialization (details below)		
Required Field Courses	9	
Elective Field Courses	9	
		18
Field Exam		Pass
Dissertation Research		12
Total Credit Hours		48

Field Specialization: Urban Policy and Administration	Semester Hours	Total
Required courses:		
UPA 630 Politics and Urban Policy	3	
UPA 660 Advanced Organizational Behavior	3	
UPA 661 Public Administration and Organizational Theory	3	
		9
Electives:		
Eligible electives are listed on the web site. Students should consult the Student Advisor or Program Director in selecting electives.	9	
		9
Total Field Specialization		18

Field Specialization: Urban Planning and Development	Semester hours	Total
Required Courses:		
UPA 623 Comparative Urban Development	3	
UPA 683 Land Use Planning	3	
UPA 684 Planning Theory	3	
Electives		9
Eligible electives are listed on the web site. Students should consult the Student Advisor or Program Director in selecting electives.		9
Total Field Specialization		18

Academic Policies

Waivers And Prerequisites

Students who have recently and satisfactorily completed equivalent courses elsewhere may request the up to nine hours of course work count towards their 48 hours of required Ph.D. study. Students who are not prepared for advanced study or do not hold the prerequisites for a particular course will be required to complete remedial work. Such courses do not count toward degree credit.

Satisfactory Progress

Students who fall below a 3.0 GPA or fail to receive passing grades in their course work are subject to dismissal from the program. No probationary period is provided for students failing core courses. The Admissions and Review committee will review performance of students each semester to ensure students are making satisfactory progress.

Comprehensive Exams

To qualify for Ph.D. candidacy, students must satisfactorily complete (1) the core examination and (2) a field examination. Each student must sit for the core examination as soon as it is offered after the student completes all core courses. Students sit for the field exam after having completed core and elective courses (36 credits). Students must pass the core exam before proceeding to the field exam. Students must sit for exams as soon as they are eligible to take the exam. Examinations are held in May each year. Examinations always have a written component and may also include an oral component. Consult with the chair of the relevant examination committee for details about a particular exam.

Qualifying exams are graded on a Pass/Fail basis. The written examinations are evaluated independently and anonymously by each examiner. Examining committees ordinarily meet as a group before determining a final grade. Examining committee chairs forward grades to the Program Director who officially notifies students of their results.

Should a student not achieve a Pass on an exam, he or she must take the exam again when offered the following year. The examining committee may specify additional work to be completed before sitting for a subsequent exam. Students will not have more than two opportunities to sit for and satisfactorily complete each qualifying exam. Failure to retake the exam or failing to pass the exam on the second effort will result in dismissal from the Ph.D. program. Students may change field specializations for the second exam as long as they take the field exam within one year of the first effort. In this case, the student will only have one opportunity to pass the exam. Failure to pass a core or field exam will result in a student losing his or her graduate assistantship.

Departmental Faculty

Professors

Steven C. Bourassa, *Chair*
 John I. Gilderbloom
 David Imbroscio
 Steven G. Koven
 Thomas S. Lyons
 Peter Meyer
 H.V. Savitch
 Lyle Sussman
 Wayne M. Usui
 J. Allen Whitt
 Ronald K. Vogel, *Program Director*

Master of Urban Planning in Urban Planning

Major Code: URPL
 Degree Code: MUP
 Unit: GB
 Department Webpage: <http://supa.louisville.edu/aprograms/MUP.htm>

General Information

The Master of Urban Planning Program strives to play an important role in the University of Louisville's urban/metropolitan mission by creating the best possible learning environment for the student whose goal is to become a planning practitioner, by advancing the state of knowledge in the planning field through faculty research, and by bringing that knowledge to bear on the challenges facing the community.

The School of Urban and Public Affairs offers a Master of Urban Planning (M.U.P.) degree in cooperation with the Department of Geography and Geosciences. The M.U.P. Program prepares students to work in a wide variety of fields, including land use and environmental planning, urban design, historic preservation, transportation planning, open space planning, housing planning, economic development planning, real estate development, and the development of geographic

information systems. With the continuing expansion of Louisville and the nation's other metropolitan areas, urban planning is one of the leading professional fields in terms of demand and job satisfaction, according to surveys by Jobs Rated Almanac and the Encyclopedia of Careers and Vocational Guidance.

Students can specialize in one or two of four areas: land use and environmental planning; administration of planning organizations; housing and community development; and spatial analysis for planning. Students have the opportunity to benefit from working on real planning problems through the required internship and studio courses. Studio courses are taught at the Urban Design Studio, located in downtown Louisville and operated by the M.U.P. Program in cooperation with the Louisville Metro government and the School of Architecture of the University of Kentucky.

The degree requires 48 credit hours (two years of full-time study or the equivalent in part-time study), although up to 12 hours of relevant graduate course work may be transferred into the program. Students may enroll on a part-time or full-time basis. Classes are held in the evenings and on weekends to meet the scheduling needs of persons holding full-time jobs.

Admission Procedures

Applicants must hold a bachelor's degree (any major is acceptable), must have taken the Graduate Record Examination (GRE), and must submit two letters of reference (at least one from someone familiar with the applicant's academic abilities) and a statement of purpose. Admission is competitive and generally requires a minimum combined quantitative and verbal GRE score of 1,000 and a minimum undergraduate GPA of 3.0 (B).

An application form can be obtained at the Program website. All required application materials must first be submitted to Graduate School Admissions. Those materials will then be forwarded to the M.U.P. Program for review by the Admissions Committee. The program will notify the applicant of the Committee's decision.

Program

- Core Courses (24)
- PLAN 500 Foundations of Economics (3)
- PLAN 600 Planning History and Issues (3)
- PLAN 601 Planning Theory (3)
- PLAN 602 Statistics for Public Affairs(3)
- PLAN 603 Urban Economics (3)
- PLAN 604 Applied Research Methods (3)
- PLAN 605 Land Use and Planning Law (3)
- PLAN 606 Professional Practice (3)
- One Specialty Area (listed below) (9)
- Other Electives (9)
- PLAN 649 Planning Internship (3)
- PLAN 650 Capstone (3)

Minimum Total Hours (48)

Specializations

The courses available for each specialization are as follows. Other courses not listed below may be substituted with the permission of the Program Director.

Specialization in Land Use and Environmental Planning

Three courses (9 credit hours) from the following:

- PLAN 501 Urban Environmental Quality (3)
- PLAN 607 Land Use and Environmental Planning (3)
- PLAN 608 Geographic Information Systems (3)
- PLAN 612 Mediation and Dispute Resolution (3)
- PLAN 620 Environmental Policy (3)
- PLAN 621 Urban Infrastructure (3)
- PLAN 622 Urban Design (3)
- PLAN 623 Environmental Policy and Natural Hazards (3)
- PLAN 651 Urban Design Studio (3)
- PLAN 652 Neighborhood Planning Studio (3)

Specialization in Administration of Planning Organizations

Three courses (9 credit hours) from the following:

- PADM 608 e-Government (3)
- PADM 612 Non-profit Grantsmanship (3)
- PLAN 609 Public Budgeting and Finance (3)
- PLAN 610 Strategic Management and Planning (3)
- PLAN 611 Human Resources Management (3)
- PLAN 612 Mediation and Dispute Resolution (3)
- PLAN 613 Public Administration and Organizational Theory (3)

Specialization in Spatial Analysis for Planning

Three courses (9 credit hours) from the following:

- PLAN 608 Geographic Information Systems (3)
- PLAN 614 Retail Site Analysis (3)
- PLAN 615 Spatial Statistics (3)
- PLAN 616 Analytical Urban Geography (3)
- PLAN 618 Urban Demography (3)
- PLAN 619 Urban Geographic Information Systems Applications (3)
- PLAN 621 Urban Infrastructure (3)
- PLAN 624 Urban Transportation Planning (3)
- PLAN 628 Economic Conditions and Forecasting (3)

Specialization in Housing and Community Development

Three courses (9 credit hours) from the following:

- PLAN 614 Retail Site Analysis (3)
- PLAN 617 Housing and Community Development (3)
- PLAN 621 Urban Infrastructure (3)
- PLAN 622 Urban Design (3)

- PLAN 625 Historic Preservation (3)
- PLAN 626 Economic Development (3)
- PLAN 629 Real Estate Principles (3)
- PLAN 630 Real Estate Investment (3)
- PLAN 631 Real Estate Development (3)
- PLAN 651 Urban Design Studio (3)
- PLAN 652 Neighborhood Planning Studio (3)

Departmental Faculty

Professors

Thomas S. Lyons, *Director*
 Steven C. Bourassa, *Chair*
 John I. Gilderbloom
 Steven G. Koven
 Peter B. Meyer
 H.V. Savitch

Associate Professors

Carrie G. Donald
 Clara A. Leuthart

Assistant Professors

David M. Simpson

College of Business

R. Charles Moyer, Ph.D., Dean

The following graduate programs are offered within the College of Business:

Accountancy – M.Ac.
 Business Administration – M.B.A.
 Entrepreneurship – Ph.D.

Master of Accountancy

Major Code: ACCY
 Degree Code: MAC
 Unit: GB
 Department Webpage: <http://cm.cbpa.louisville.edu/content.asp?id=66>

Program Information

The degree program is available to qualified individuals possessing a bachelor's degree from an accredited college or university.

No specific undergraduate major is required. An applicant whose curriculum did not include the appropriate course work may be admitted on conditional status while completing the undergraduate prerequisites and later enroll in the M.Ac. program.

The M.Ac. program is primarily an evening program. A student can enroll as either a part-time or full-time student (9 hours for full-time). During the Fall and Spring semesters, courses are typically offered Monday through Thursday, one evening a week, from 5:30 until 8:15 p.m. During the summer semester, there are two successive five-week sessions and classes meet three evenings a week-- Monday, Tuesday, and Thursday, 5:30-8:15 p.m.

All required courses are offered on a rotating basis in the Fall and Spring semesters, along with a variety of elective courses. A smaller selection of courses is offered during the two summer sessions.

Program Admission Procedure

Admission into the M.Ac. program is competitive. The procedures for admission into the M.Ac. program are as follows:

1. Submit a completed graduate application to the University of Louisville Graduate School Admissions Office available on-line at <http://graduate.louisville.edu/app/>. There is a \$50 application fee. Program candidates are admitted in the Fall semester (which begins in late August), and in the Spring semester (which begins in mid-January). The application deadline (and submission of all application materials) for both of these terms is 120 days prior to the beginning of the semester. If circumstances prevent an applicant from meeting the deadline, the applicant needs to contact the M.Ac. counselor.
2. Official transcripts verifying the receipt of a baccalaureate degree from an accredited institution must be submitted to the Graduate School Admissions Office.
3. The Graduate Management Admission Test (GMAT) is required. Designed to measure general aptitude for graduate study in business administration, it does not test knowledge in specific business subjects. An admission decision will not be made without the GMAT scores. See web (www.mba.com) or call 1-800-GMAT-NOW.
4. A written personal statement is required and especially important for the applicant who has either a marginal GMAT score, undergraduate grade point average, or both. The statement should demonstrate the applicant's motivation and desire to earn an advanced degree as evidenced by professional achievements, community involvement, etc.
5. Two letters of recommendation need to be from individuals familiar with the applicant's academic performance. Professional letters from employers are acceptable when substantial time has elapsed since the applicant has attended an academic institution.
6. International applicants are required to take the TOEFL examination if English is not the native language. Applicants

who have not scored 213 or higher on the TOEFL may choose to apply to the Intensive English as a Second Language (IESL) Program. Successful completion of this program or passing the Exit Examination in the advanced level of IESL will be considered adequate proof of the English proficiency required for course work in the M.Ac. program. Acceptance to the Intensive English Program does not constitute acceptance to the M.Ac. program. For information and application forms, write to IESL, University of Louisville, Louisville, KY 40292.

Curriculum Requirements

The following curriculum requirements apply to all M.Ac. degree students:

- Strict compliance with prerequisites is required. Check the course descriptions listed in this catalogue.
- Six hours of graduate courses may be taken in non-business, non-economic areas. Business Education courses are not accepted unless special permission has been given by the M.Ac. counselor. **NO BUSINESS COURSE MAY BE TAKEN PASS/FAIL.**
- All graduate students are expected to make steady and satisfactory progress toward their degree. Students who fail to maintain enrollment for a period of more than 12 months will be considered to have withdrawn from the program. Students who seek to return after such a period of time (or longer) are required to contact the M.Ac. counselor for re-admission. Based on the request of the School, the Graduate Dean will consider the student for re-admission.

Transfer Credit

A student may be allowed to transfer up to six semester hours of graduate academic credit from another accredited institution(s) that offers advanced degrees. Only courses in which the student earned a grade of B or better will be considered for transfer. The hours will be transferred, not the quality points. A transfer of credits is possible only after earning six hours from the University of Louisville College of Business. Students wishing to transfer credit should make a request to the M.Ac. counselor. Final approval of the transfer of credit must come from the Graduate School.

Honors

Students who complete the M.Ac. program with a grade point average of 3.75 or higher will be recognized by The College of Business faculty as graduating "With Distinction."

Degree Requirements

Candidates for the M.Ac. degree must:

- Earn a minimum of 24 of the 30 graduate-credit hours in residence at the University of Louisville.
- Complete degree course requirements within six years of the semester admitted to the M.Ac. degree program.

Master of Accountancy Foundation Content

The foundation coverage must be completed prior to actual admission. The course numbers shown after the descriptions of the U of L courses would meet that foundation requirement. Please note, all courses, both undergraduate and graduate will be calculated in the graduate-career grade point average. Only approved courses at the 500-level and all 600-level courses will be counted as coursework toward the completion of the master's degree. Students are required to complete foundation/core requirements *prior* to pursuing additional course requirements.

Content	Equivalent U of L Courses
Taxation Overview of federal taxation, tax terminology, income tax formulas, tax accounting methods, gross income, deductions and losses, significant coverage of property transactions, introduction to tax research, tax problems relating to all aspects of corporate and partnership taxation.	ACCT 315 and ACCT 415
Auditing and Systems Accounting transaction processing cycles, systems development, system documentation, database systems, evaluation of internal control structures, assessment of control risks.	CIS 300 and ACCT 310 with ACCT 411 or 430
Managerial Cost Accounting Cost accounting concepts and terms, job costing and process costing, activity-based costing, budgeting, variable costing, C-V-P analysis, differential/relevant cost and revenue analysis, standard costing and variance analysis.	ACCT 320
Financial Accounting The range of topics covered in the Intermediate accounting sequences. For some undergraduate programs, this is a two-course sequence; for others it is a three-course sequence.	Intermediate Accounting Sequence

Master of Accountancy Course Requirements

The Master of Accountancy program consists of 21 graduate hours in accounting courses, 3 graduate hours in commercial law and 6 graduate hours of electives.

Courses	Semester Hours	Total	
ACCT 611 Cost & Operations Mgmt	3		
ACCT 615 Advanced Financial and Governmental Accounting	3		
ACCT 631 Federal Taxation	3		
ACCT 641 Financial Accounting & Professionalism	3		
ACCT 651 Auditing & Systems	6		
ACCT 655 Special Topic in Accounting	3		
CLAW 610 Commercial Law for Professional Accountants	3		
Professional Interest Area Electives	6		
Total Credit Hours		30	

Electives may be chosen from any 600-level course offered by the CB. Electives outside the college may be taken with permission of the Director of the School of Accountancy.

Academic Policies

The following standards apply to all M.Ac. degree candidates:

1. A faculty member teaching a graduate-level course may assign a grade with either a plus (e.g., B+) or minus (e.g., B-). See section on Academic Policies and Requirements (Grading System).
2. Upon admission to the program, a 3.0 grade point average must be maintained. The calculations exclude transfer work, but does include all coursework for which a student registers as a graduate student, whether undergraduate or graduate.
3. Grades of A, B, or C are the only grades to be considered as passing.
4. A maximum of six hours in 600-level courses with a grade of C may count toward the completion of degree requirements.
5. A student who has received a grade of C, D, or F may repeat the course upon approval of the Graduate School Dean and the M.Ac. counselor. When a student repeats a course, the grade point average will be calculated on the basis of the last grade attempted, although all previous grades will remain on the transcript.

6. All graduate students must maintain a 3.0 grade point average or the student will be placed on probation. If the student does not restore the grade point average to 3.0 by the end of the next semester of enrollment, the student will be dismissed from the program.

7. An academically dismissed student is required to discontinue course enrollment for a minimum of one semester. After the semester of dismissal, the student may submit a written petition to the M.Ac. counselor requesting readmission. Such a request must be submitted at least 40 days prior to the semester in which enrollment is requested. The Graduate Dean must approve any readmission to the program.

8. Students are restricted to no more than 3 hours of independent study.

Visiting Students

A student visiting from another university may take the M.Ac. course work on a space-available basis. Visiting students must also meet Graduate School requirements stated in the General Section of this catalogue.

A U of L M.Ac. student who wishes to be a visiting student at another academic institution for a particular semester must obtain permission from the M.Ac. counselor. Visiting student status is not allowed to a student who is on academic probation. Only grades of A and B can be transferred back to the University of Louisville and quality points are not transferred. No more than 6 credit hours can be taken from a non-AACSB accredited school.

Departmental Faculty

Professors

Sidney J. Baxendale
 Betty C. Brown
 Richard E. Coppage
 Alan S. Levitan
 Richard M. Walter
 Benjamin P. Foster

Associate Professors

William Stout, *Director*
 Alan N. Attaway
 Julia N. Karcher
 Wyatt McDowell

Master of Business Administration

Major Code: BA
 Degree Code: MBA
 Unit: GB
 Department Webpage: <http://cbpa.louisville.edu>

General Information

The objective of *THE* Louisville M.B.A. is to educate and develop business managers for a global environment.

THE Louisville M.B.A. program is accredited by the Association to Advance Collegiate Schools of Business (AACSB International) and the International Association of Management Education (IAME). Additionally, the program is accredited through the University's regional accreditation of the Southern Association of Colleges and Schools (SACS).

THE Louisville M.B.A. degree program is available to qualified individuals possessing a bachelor's degree from a regionally accredited college or university. No specific undergraduate major is required, though a business background is preferred. Applicants with undergraduate degrees in Business Administration need 36 hours of 600-level M.B.A. courses to fulfill the degree requirements. Applicants whose undergraduate curriculum did not include courses in Business Administration must successfully complete a set of 500-level foundations courses, normally 12 hours, or equivalent undergraduate courses, with a grade of B or better before enrolling in the 36 hour M.B.A. curriculum.

THE Louisville M.B.A. program is primarily an evening program in which an individual can enroll as either a part-time or full-time student. During the Fall and Spring semesters, courses are typically offered Monday through Thursday, one evening a week, from 5:30 until 8:15 p.m. During the summer semester, there are typically two five week terms with classes meeting three nights a week. Occasionally classes may be offered that span two terms or meet during the day.

All required 600-level courses are offered in the Fall and Spring semesters, along with a selection of elective courses. A smaller selection of 600-level courses may be offered during the summer session.

Program Admission Procedure

Admission into the M.B.A. programs is competitive. Entering M.B.A. candidates at the University of Louisville are in the top third of all entering M.B.A. candidates nationwide. The procedures for admission into the U of L M.B.A. program are listed below: For more information, see <http://cbpa.louisville.edu/> or apply on-line directly at <http://graduate.louisville.edu/app/>.

1. Submit a completed graduate application to the University of Louisville Office of Graduate Admissions. There is a \$50 application fee. Program candidates are admitted in the Fall semester (which begins in late August), and in the Spring semester (which begins in mid-January). The priority deadline for submitting applications and all application materials is March 31 for Fall and October 1 for Spring. Applications may be considered after these dates on a space-available basis.

2. Official transcripts of all undergraduate and graduate work including verification of receipt of a baccalaureate degree

from an accredited institution must be submitted to the Office of Graduate Admissions.

3. The Graduate Management Admission Test (GMAT) is required. Designed to measure general aptitude for graduate study in business administration, it does not test knowledge in specific business subjects. An admission decision will not be made without the GMAT scores. See www.mba.com or call 1-800-GMAT-NOW.

4. A one page written personal statement is required. The statement should demonstrate the applicant's motivation and desire to earn an advanced degree. Professional achievements, community involvement, etc. may be noted here.

5. Two letters of recommendation from individuals familiar with the applicant's academic performance. Professional letters from employers are acceptable when substantial time has elapsed since the applicant has attended an academic institution.

6. Candidates must provide a current resume.

7. International applicants are required to take the TOEFL examination if English is not the native language. Applicants who have not scored 213 or higher on the TOEFL may choose to apply to the Intensive English as a Second Language (IESL) Program. Successful completion of this program or passing the Exit Examination in the advanced level of IESL will be considered adequate proof of the English proficiency required for course work in the M.Ac. program. Acceptance to the Intensive English Program does not constitute acceptance to the M.Ac. program. For information and application forms, write to IESL, University of Louisville, Louisville, KY 40292.

Curriculum Requirements

The following curriculum requirements apply to all M.B.A. degree students:

- Students must complete **all** prerequisite courses with a grade of B or better before enrolling in any MBA (600) level courses.
- A 500-level business course cannot be used as an elective.
- Students must make steady and satisfactory progress toward their degree. Students who fail to maintain enrollment for a period of more than 24 months will be administratively withdrawn from the program.
- Students who seek to return after such a period of non-enrollment are required to apply for admission to the M.B.A. program.

NO BUSINESS COURSE MAY BE TAKEN PASS/FAIL.

Transfer Credit

A student may be allowed to transfer up to six semester hours of graduate academic credit from another AACSB -accredited institution(s) that offers advanced degrees. Only courses in which the student earned a grade of B or better will be consid-

ered for transfer. The hours will be transferred, not the quality points. A transfer of credits is possible only after earning six hours from the University of Louisville College of Business. Students wishing to transfer credit should make a request to the academic counselor. Final approval of the transfer of credit must come from the Graduate School.

Honors

Students who complete the M.B.A. program with a grade-point average of 3.75 or higher will be graduated "With Distinction." Any graduate with a 4.0 standing will also be nominated for the Phi Kappa Phi Honorary Society.

Degree Requirements

Candidates for the M.B.A. degree must:

- Earn a minimum of 30 of the 36 graduate credits in residence at the University of Louisville.
- Complete degree course requirements within six years of the semester admitted to the M.B.A. degree program.

THE Louisville M.B.A. Foundation Course Content

The undergraduate and 500-level courses provide students with the academic common body of knowledge necessary for undertaking the M.B.A. curriculum requirements. The 500-level courses are restricted to students who have been admitted to the Graduate School. Upon admission to the M.B.A. program, the student must demonstrate proficiency in the business foundation courses. They may do this by submitting evidence of equivalent undergraduate courses with a minimum grade of "B" or by completing 500-level courses or the specified undergraduate courses with a minimum grade of "B".

The foundation coverage must be completed prior to enrolling in any 600-level M.B.A. course. The course numbers shown after the descriptions of the U of L courses would meet that foundation requirement.

Content	Equivalent U of L Courses
Fundamentals of Accounting Fulfills a Foundation Core requirement only. Fundamental principles of accounting needed by the manager. Topics include the assumptions of accounting, recording and reporting transactions; interpretation of data for decision-making purposes	ACCT 500 or ACCT 201 and ACCT 202

Foundations of Economics Prerequisites: Consent of instructor. Note: Crosslisted with PLAN 500. Survey of supply and demand analysis, cost and production, and price determination in different market organizations. Analysis of GOP, unemployment, inflation, and economic growth.	ECON 500 or ECON 201 and ECON 202
Managerial Statistics Prerequisite: MATH 107. Data display techniques, such as frequency distributions and histograms. Descriptive statistics, including measures of center and spread, correlation, and least squares lines. Probability distributions, with emphasis on binomial, Poisson, and normal distributions. Inferential statistics, including confidence interval estimation, tests of significance, and process control charting. Students will learn to do statistical functions using Excel.	MGMT 501 (MGMT 201)
Business Finance Prerequisites: ACCT 500, ECON 500, MGMT 501 (201). An introduction to financial concepts from the corporate perspective. Topics include the basics of financial statements, an overview of the financial markets, risk and return, the time value of money, security valuation using time value concepts, cash flow determination and valuation, and long-term capital investment.	FIN 500 or FIN 301

THE Louisville M.B.A. Curriculum Requirements

THE Louisville M.B.A. program consists of 33 graduate hours in business courses and 3 graduate hours of business electives. The curriculum appears in sequential order below. Students must follow the sequence and meet all prerequisites for each course. Course prerequisites are listed with the course descriptions. Students must enroll in MBA 625 and MBA 630 concurrently. The elective course may be chosen from any 600-level

course offered by the CBPA in the departments of Accountancy, CIS, Economics, Finance, Management, or Marketing.

MBA 605 Managerial Economics	3	
MBA 610 Organizational Behavior & Human Resource Management	3	
MBA 615 Business Valuation and Analysis	3	
MBA 620 Global Economics	3	
MBA 625 Managerial Accounting	3	
MBA 630 Operations: Design & Analysis	3	
MBA 635 Managerial Finance	3	
MBA 640 Marketing & Distribution Management	3	
MBA 645 Leadership & Ethics	3	
MBA 650 Global Business	3	
Business Elective	3	
MBA 655 Strategic Management	3	
Total Credit Hours		36

M.B.A./J.D. Program

The M.B.A./J.D. program is offered jointly by the College of Business and the School of Law. The purpose of the program is to combine the two-year Master of Business Administration (M.B.A.) program and the three-year Juris Doctor (J.D.) program into one four-year, full-time program. Upon successful completion of the program, the student is awarded both the M.B.A. and the J.D. degrees. The template that follows outlines the M.B.A. side of the curriculum, including the course substitutions from the J.D. degree program.

MBA 605 Managerial Economics	3	
MBA 610 Organizational Behavior & Human Resource Management	3	
MBA 620 Global Economics	3	
MBA 625 Managerial Accounting	3	
MBA 630 Operations: Design & Analysis	3	
MBA 635 Managerial Finance	3	
MBA 640 Marketing & Distribution Management	3	
MBA 645 Leadership & Ethics	3	
MBA 655 Strategic Management	3	
LAW 864 Accounting for Lawyers	3	

LAW 887 Seminar in International Transactions	3	
LAW 962 Corporate Finance	3	
Total Credit Hours		36

This program is open to all students who have successfully completed a baccalaureate degree at an accredited college or university. To be admitted into the program, the student is required to apply to and be accepted by both the College of Business and the School of Law. Such a procedure requires the student to meet the admission requirements of both schools.

Students seeking admission into this program need to submit a letter to the admissions office of the school in which they first intend to take courses, or in which they are currently taking courses, and forward a copy of such letter to the admissions office of the other school. Applicants will receive written notification regarding whether their admission request is approved or disapproved.

Candidates in the joint M.B.A./J.D. program must accumulate 27 directed hours in the M.B.A. curriculum (in lieu of the normal 36 hours) and 81 directed hours in the J.D. curriculum (in lieu of the normal 90 hours). The combination of Law 864, Law 887, and Law 962 will substitute for MBA 615 and MBA 650. An additional 3 credit hours from the J.D. curriculum will substitute for the 3 hour business elective in the M.B.A. program.

While enrolled in the College of Business, the M.B.A./J.D. students are subject to all academic policies and procedures that M.B.A. students are expected to follow.

IMBA – The M.B.A. for Entrepreneurial Thinking

The IMBA program – The M.B.A. for Entrepreneurial Thinking departs from the traditional three-credit hour, fifteen-week format and uses an integrative, interactive approach that more closely resembles the natural business environment. The IMBA program teaches entrepreneurial skills to those who want to thrive in today's nimble corporations or launch their own businesses and features an entrepreneurship concentration. Students apply the fundamentals of group dynamics, leadership, and strategic thinking when they participate as team members and will gain hands-on experience with the practical application of information technology. Courses are offered as modules and are frequently team-taught by faculty across disciplines.

Each student is required to have access to a personal computer seven days a week, 24 hours a day. In addition to in-class meetings, students communicate via e-mail and web conferences with team members and faculty. The two-year program begins each May. Classes meet two nights a week from 6 p.m. to 8:45 p.m. plus Saturdays during the first summer. Several Saturday classes are held each semester during the remainder of the program. Although this program offers some exciting alternatives to *THE* Louisville M.B.A. program format, it significantly reduces flexibility available in scheduling classes

and completing requirements. Each class of students must go through the module sequence together.

Prospective students interested in more information on this program should contact the Advising Center, College of Business, 852-7439.

***THE* Louisville M.B.A./M.Ac. Joint Program Curriculum Requirements**

Students admitted to the joint M.B.A./M.Ac. program are expected to complete all requirements as outlined below. The joint program consists of 48 graduate credit hours. Students must follow the required sequence of *THE* Louisville M.B.A. curriculum.

	Semester Hours	T o t a l
MBA 605 Managerial Economics	3	
MBA 610 Organizational Behavior & Human Resource Management	3	
MBA 620 Global Economics	3	
MBA 625 Managerial Accounting	3	
MBA 630 Operations: Design & Analysis	3	
MBA 635 Managerial Finance	3	
MBA 640 Marketing & Distribution Management	3	
MBA 645 Leadership & Ethics	3	
MBA 650 Global Business	3	
MBA 655 Strategic Management	3	
Acct 611 – Cost and Ops Mgmt	3	
Acct 615 – Adv. Fin & Govt Acct	3	
Acct 631 – Federal Taxation	3	
Acct 641 – Fin Acct & Prof	3	
Acct 651 – Auditing and Systems (6 hours)	6	
Claw 610 – Comm Law for PA	3	
Total Credit Hours		48

Students in the joint program will be excused from MBA 615 and will take Acct 611 in place of MBA 625. (These students will be required to enroll in ACCT 611 and MBA 630 concurrently). In addition, MBA 605 replaces Acct 655. 6 hours from

MBA courses count towards electives in the M.Ac. degree program, and 3 hours from the MAC program count toward the elective in the M.B.A. degree program.

Academic Policies

The following standards apply to all M.B.A. degree candidates:

- A 3.0 grade point average must be maintained or the student will be placed on probation. If the student does not restore the grade point average to a 3.0 by the end of the next enrolled semester, the student will be dismissed from the program.
- An academically dismissed student is required to discontinue course enrollment. After dismissal, the student may submit a written petition to the academic counselor requesting re-admission. The Graduate Dean must approve any re-admission of an academically dismissed student.
- A faculty member teaching a graduate level course may assign a grade with either a plus (e.g., B+) or a minus (e.g., B-). See the section on Academic Policies and Requirements for the point value of plus and minus grades.
- Grades of "A", "B", or "C" are the only grades considered as passing. However, a "D" or an "F" will be used in calculating the grade point average.
- A maximum of six hours of 600-level courses with a grade of "C" may count toward the completion of degree requirements.
- A 3.0 grade point average must be maintained in the program. These calculations exclude transfer work. If a 3.0 GPA is not maintained the student will be placed on probation. Continuation in the program will be dependent upon the student's subsequent performance and evaluation by the designated college academic officer.
- Students are restricted to no more than one independent study from any single faculty member in the degree program. It is possible to earn a maximum of 3 credit hours of independent study as the elective course in the curriculum.
- A student who has received a grade of "C", "D", or "F" may repeat the course upon approval of the Graduate Dean and the academic counselor. When a student repeats a course, the grade point average will be calculated on the basis of the last grade attempted, although all previous grades will remain on the transcript.

Visiting Students

A student visiting from another university may take the M.B.A. course work on a space-available basis and provided they meet the prerequisites for the course. Visiting students must also meet Graduate School requirements stated in the General Section of this catalogue.

A U of L M.B.A. student who wishes to be a visiting student at another academic institution for a particular semester must obtain permission from the academic counselor. Visiting student status is not allowed to a student who is on academic probation. Only grades of A and B can be transferred back to the University of Louisville and quality points are not transferred.

Transfer credit is only allowed for up to six credit hours from an AACSB-accredited school.

Quantitative and Computer Skills Requirements

M.B.A. candidates are expected to be academically proficient in quantitative skills on entry to the M.B.A. core curriculum. Prior academic work may be used as evidence of proficiency. Proficiency must be attained before enrolling in any M.B.A. core courses. The skills consist of:

- Computer literacy: student must have access to a computer and validate literacy in business software (Word Processing, Spreadsheets, data base analysis), web access and e-mail. The University offers free e-mail and web accounts at a modest cost. Students lacking skills in business software can take CIS 100 to gain familiarity with the software.
- Mathematics: Three or more semester credit hours of prior undergraduate course work in mathematics comparable to MATH 111, College Algebra, passed with a grade of "C" or higher. Students lacking prior course work can take MATH 111 to satisfy the requirement.

Additional Requirements

Students must complete the necessary prerequisites before admission to the program is granted.

All other academic and admission policies described in the Graduate Catalog will be followed.

Overseas Program

The College of Business offers its M.B.A. degree at selected overseas sites. At present these sites include Athens and Panama City. University of Louisville faculty travel to these locations to present the courses for the programs. The overseas programs are designed to serve students residing outside the U.S. The programs have separate admission and registration processes, different time schedules and tuition rates, and are fixed-length, lock-step programs which do not allow electives. For information on the overseas programs, contact the faculty coordinator for the particular program of interest.

Departmental Faculty

THE Louisville M.B.A. draws from members of the Graduate faculty in the College of Business.

Doctor of Philosophy in Entrepreneurship

Major Code: ENTR

Degree Code: PHD

Unit: GB

Department Webpage: <http://cm.cbpa.louisville.edu/content.asp?id=54>

General Information

Admission to the program is highly competitive. Minimum qualifications are a score of 620 on the graduate management admissions test and a 3.6 grade point average on previous graduate work. Applicants are admitted once a year in the Fall semester.

No specific graduate or undergraduate major is required. However, applicants can only be admitted provisionally until they have successfully completed coursework equivalent to the UofL's M.B.A. core courses. The completion of these core courses is a prerequisite for receiving a research assistantship. This is a full-time program, requiring year-round study and a 20 hour/week paid research assistantship. Typically, students can finish their course work in two to three years. All students take 12 required seminars in addition to the courses they select for their minor area of study. The total time required to complete the degree depends on the length of time required to complete and defend a dissertation, which demonstrates the ability to independently conduct and report on original research.

All required courses are offered on a rotating basis in the Fall and Spring and Summer semesters, along with a variety of elective courses.

Curriculum Requirements

The following are the curriculum requirements for the entrepreneurship Ph.D. Because the state of the knowledge in the field changes, these content requirements may change in order to address topics of current interest. Nevertheless, changes in required courses will not increase the number of required credits for the program.

Year 1--Fall

Entrepreneurship 700: Current Topics in Entrepreneurship Research

This seminar introduces students to the most influential, recent research findings that are guiding current thinking. It is more than a survey course; it is a critical review that can provide a foundation for future research by students.

Entrepreneurship 710: Sociological Foundations of Entrepreneurship

This seminar emphasizes group influences on the appearance, growth and diminution of entrepreneurial activities. In addition, it treats the organizational and social context of firm formations, as well as bureaucratology, and industrial and organizational selection processes.

Entrepreneurship 720: Economic Foundations in Research in Entrepreneurship

The seminar includes the development of economic thought related to entrepreneurship, ranging from historical figures in economic theory such as Cantillon and Ricardo to contemporary schools of thought on entrepreneurship, including the

Austrian perspective. In-depth analyses of pricing strategies, market structures, dynamic vs. static analysis, regulatory issues, and examples of applications of economics in research in entrepreneurship are presented. Other topics may include real options theory, rational expectations, the economics of information, econometrics, transfer pricing, transaction cost economics, and agency theory.

Entrepreneurship 725: Linear Statistics

This seminar covers advanced linear statistical models, the distribution of quadratic forms, estimation and hypothesis testing in the general linear model, including special linear models and their applications. The prerequisites for this seminar are undergraduate matrix algebra and undergraduate mathematical statistics, which may be taken concurrently.

Year 1--Spring

Entrepreneurship 726: Advanced Multivariate Techniques

This seminar covers all multivariate techniques in common usage, including cluster analysis, factor analysis, discriminant analysis, and covariance structure modeling.

Entrepreneurship 730: Entrepreneurship from a Strategic Perspective

This seminar examines the entrepreneur in a industrial context, which provides insight into such issues, as performance, survival, competitive advantage, the role of a venture's resources, and positioning of the business plan.

Entrepreneurship 733: Psychological Foundations of Entrepreneurship

Provides students with discipline-based foundations of theory and research. Specifically, this seminar explores the intellectual history of psychology in entrepreneurship beginning in the early 1900s to the 1970s. Topics include: the social context of individual behavior, motivation and job satisfaction.

Entrepreneurship 761: Research Design

This seminar is designed to teach students the fundamentals of research design in the social sciences. It is intended for entrepreneurship doctoral students who will conduct empirical research publishable in scholarly journals. Topics include philosophy of science, theory building, causality analysis, overviews of statistical methods, qualitative methods and psychometric theory.

Year 1

(A student's dissertation committee must approve all electives required for the satisfaction of program requirements. Any electives that support a student's research objectives may be considered. To maintain maximum flexibility, no list of potential electives has been developed, and as a result, prior permissions to enroll in them have not been obtained. It is a student's responsibility in consultation with his or her committee to select the most appropriate electives.)

Year 1--Summer

Entrepreneurship 750: Research Methods I

Research using large data bases and panel studies. Includes survey design and cleaning data sets, as well as appropriate statistical analysis techniques.

Entrepreneurship 762: Directed Readings

This seminar provides students with an opportunity to focus on research topics of particular interest to them while at the same time requiring them to synthesize and extend what is known about a particular research topic.

Year 2--Fall

Entrepreneurship 753: Venture Capital

This seminar addresses the functioning and operation of venture capital firms and venture capital markets, together with their relationships with the users of funding, typically the founders of high-growth potential new ventures. It also examines the market for business angels and their unique contribution to the founding of new ventures. The emphasis of this seminar is on the development of testing of theory to understand venture capital processes.

Entrepreneurship 770: Directed Readings

This individualized course may treat topics such as the following in detail: classical origins of entrepreneurial thought and analysis; informational economics or entrepreneurial competence. Topics are designed to reinforce a student's research interests.

1 Concentration/Social Science Elective

1 Research Methods Elective

Year 2--Spring

2 Concentration/Social Science Electives

Entrepreneurship 799: Doctoral Workshop

This workshop is a seminar style review of award winning dissertations in entrepreneurship. The major assignment is to incorporate the best approaches of others into the development and presentation of a dissertation proposal.

Year 2--Summer

Second year paper

Preliminary Examinations

Year 3--Fall

Dissertation Proposal

Electives

(A student's program will typically consist of at least 54 credit hours of seminar work and study beyond the master degree. A student's committee, based on a student's research objectives,

will determine the exact total. Prerequisites required to enroll in designated seminars is likely to increase this total to 64 credit hours.

Year 3--Spring

Dissertation

Years 4 and 5 as necessary

Dissertation

Departmental Faculty

Professors

Arthur J. Adams, Member, Program Oversight Committee
James O. Fiet, Brown-Forman Chair in Entrepreneurship, Program Director, Director, Program Oversight Committee

Associate Professors

Bruce H. Kemelgor, Member, Program Oversight Committee
Van G. H. Clouse, Cobb Family Professor of Entrepreneurship
Robert D. Nixon, Fischer Family Chair in Family Entrepreneurship

Term Faculty

Scott Shane, *Professor*
Bruce Kirchhoff, *Professor*
Howard Aldrich, *Professor*
Charles Hofer, *Professor*
Dean Sheperd, Associate Professor
Per Davidsson, *Professor*

School of Dentistry

Rowland A. Hutchinson, D.D.S., Acting Dean

The School of Dentistry offers the oral biology masters program through the Graduate School:

Oral Biology– M.S.

Major Code: OBIO
Degree Code: MS
Unit: GD
Department Webpage: <http://www.dental.louisville.edu/>

General Information

The School of Dentistry offers a program of study leading to the Master of Science Degree in Oral Biology. The program is directed toward a general understanding of the biology of the oral cavity and developing craniofacial region, clinical studies and biomechanics associated with dental sciences. Students

obtain the scientific knowledge and biomedical skills required to perform contemporary dental research.

Areas for research training include: molecular, cellular and craniofacial biology; craniomaxillofacial diagnostic imaging; neural crest-related craniofacial and cardiovascular disorders; biochemistry of calcium-regulating hormones; regulation of gene transcription; oral microbiology; cellular mechanisms of salivary gland secretion; gene mapping of complex traits and birth defects; infection control; protein glycosylation; protein expression and trafficking; periodontology; dental materials science; orthodontics; endodontics; prosthodontics; and health services research related to dentistry.

A minimum of 30 semester hours is needed for the M.S. degree. Requirements for the degree include courses in introductory and advanced oral biology and in data analysis, participation in seminars, and a thesis.

Other course work may be required as individualized programs are developed by students working with their thesis advisor/director and graduate committees. The graduate committee also approves proposed thesis research, reviews the thesis research, reviews the thesis for acceptance, and administers a final oral examination.

The M.S. degree in oral biology offers training particularly important to persons wishing to pursue a career in academic dentistry. The program is available to students wishing to obtain only the M.S. degree, to students enrolled in Dental Specialty Certificate/ Residency Programs, students enrolled in the D.M.D. degree program, and persons who have previously earned a D.M.D. or M.D. (or equivalent) degree.

Application for Admission

Application forms may be obtained from the Graduate School or the Office of Graduate Admissions. The application must be accompanied by a \$50.00 non-refundable application fee. The *Graduate School Application* may be submitted on-line via the world-wide <http://graduate.louisville.edu/app/>. However, applications are not processed until the application fee is received.

Credentials should be sent to the Office of Graduate Admissions at least eight weeks prior to the beginning of the semester or summer session in which the student wishes to enroll; otherwise the application may not be reviewed in time for registration.

Students currently enrolled in the D.M.D. degree program who wish to apply to the M.S. degree in oral biology program should not do so until after the completion of their first academic year in the D.M.D. program.

Program Information

Course Requirements

Major subject required (core) courses:

- OBIO 501 Biomedical Data Analysis: Experimental Design and Statistics (Fall Semester) (3 semester hours)

- OBIO 601 Introduction to Oral Biology Research (Fall Semester) (2 semester hours)
- OBIO 606 Oral Biology Seminar (Spring Semester, Prerequisite: OBIO 601) (1 semester hour)
- OBIO 619 Research (minimum of 8 semester hours required) (8 semester hours)
- OBIO 620 Thesis (minimum of 6 semester hours required; the student must register for at least 1 semester hour of OBIO 620 in the same semester as their thesis defense) (6 semester hours)

Major Subject Selective Courses

At least 4 semester hours must be in courses selected from the group identified below:

- OBIO 600 Concepts in Oral Biology (4 semester hours)
- OBIO 602 Bone and Calcium Physiology (3 semester hours)
- OBIO 604 Oral Microbiology (3 semester hours)
- OBIO 611 Craniofacial Osteology (1-3 semester hours)
- OBIO 612 Craniomaxillofacial Diagnostic Imaging (2-4 semester hours)
- OBIO 613 Diagnosis and Treatment of Temporomandibular Disorders (1 semester hour)
- OBIO 614 Advanced Oral Diagnosis/Oral Medicine (1 semester hour)
- OBIO 615 Advanced Clinical Pharmacology (1 semester hour)
- OBIO 616 Overview of Medical Genetics in Oro-facial Disease (1.5 semester hours)
- OBIO 617 Advanced Oral Pathology (1 semester hour)
- OBIO 670 Dental Gross Anatomy (6 semester hours)
- OBIO 671 General and Oral Histology (5 semester hours)
- OBIO 675 Advanced Head and Neck Anatomy (2 semester hours)

Additional approved course semester hours – These courses may be chosen from any 600-level courses offered by the Graduate School that are deemed to be relevant and applicable to the student's program of study and thesis research, and *must be approved by the student's thesis advisor/director and the Program Director*: (6 semester hours)

*Note: *OBIO 610 Advanced Topics in Oral Biology (1-4 semester hours) is strongly recommended in partial fulfillment to these 6 semester hours.*

Total semester hours required for M.S. Degree: 30 semester hours

Departmental Faculty

Professors

Norbert J. Burzynski
Janice M. Butters
Gary A. Crim
Connie L. Drisko
Allan G. Farman
Lawrence Gettleman

Allan Gould
 Robert M. Greene
 Henry Greenwell
 Bruce Haskell
 B. Edwin Johnson
 Zafrulla Khan
 Richard L. Miller
 Frederick M. Parkins
 Michelle L. Pisano
 James P. Scheetz
 Robert H. Staat
 Arthur Van Stewart
 William W. Young

Associate Professors

Douglas S. Darling
 Sven-Ulrik Gorr
 Margaret Hill
 Regan L. Moore
 Abbas Parsian
 William Scarfe
 David Scott, *Director*
 Anibal M. Silveira
 David Tasman

Assistant Professors

Steven Clark

The College of Education and Human Development

Robert D. Felner, Ph.D., Dean

The College of Education and Human Development offers the following doctoral and masters programs through the Graduate School:

Art Education – M.A.T.
 Counseling and Personnel Services – Ph.D.
 Counseling and Personnel Services – M.Ed.
 Curriculum and Instruction – Ph.D.
 Early Childhood Education – M.Ed.
 Early Elementary Education – M.A.T.
 Early Elementary Education – M.Ed.
 Educational Administration – M.Ed.
 Educational Administration – Ed.S.
 Educational Leadership and Organizational Development – Ph.D.
 Exercise Physiology – M.S.
 Health and Physical Education – M.A.T.
 Health and Physical Education – M.Ed.
 Health Professions Education – M.Ed.
 Higher Education – M.A.

Human Resource Education – M.S.
 Instructional Technology – M.Ed.
 Middle School Education – M.A.T.
 Middle School Education – M.Ed.
 Music Education – M.A.T.
 Physical Education – M.A.T.
 Reading Education – M.Ed.
 Secondary Education – M.A.T.
 Secondary Education – M.Ed.
 Special Education – M.Ed.
 Sport Administration – M.S.

General Programs Information

The Department of Teaching and Learning offers two graduate degrees leading to initial certification. The Master of Arts in Teaching (M.A.T.) degree leads to initial certification in Early Elementary Education (P-5); Middle School Education (5-9); and Secondary Education (8-12). The Master of Arts in Teaching (M.A.T.) degree in Middle School Education specifically leads to certification in Science, Social Studies, Mathematics, and English and Communications Education. The Master of Arts in Teaching (M.A.T.) degree in Secondary Education specifically leads to certification in Earth and Space Science, English, Biology, Chemistry, Mathematics, Social Studies, or Physics. There are also programs within Secondary Education leading to 5-12 certification in Business and Marketing Education and P-12 certification in French and Spanish.

The Master of Education degree leads to initial certification in Interdisciplinary Early Childhood Education; and Special Education (P-12) in the areas of Learning and Behavior Disorders (LBD); Moderate and Severe Disabilities (MSD); and Visual Impairment (VI).

Also on the graduate level are Alternative Certification programs (M.Ed. and M.A.T.) that are available for those who are currently teaching in area schools but do not yet have certification. These are available in special education (Learning and Behavior Disorders or Moderate and Severe Disabilities), middle grades (English and Communications, Mathematics, Social Studies, Science) and secondary education (English, Mathematics, Social Studies, Biology, Chemistry, Physics and Earth Space Science, and grades P-12 in French and Spanish). Alternative Certification Programs have a number of specific application requirements for admission to the program, including passing the content PRAXIS and having employment in the local schools.

If you are interested in Art Education or Music Education for grades P-12, please refer to the Fine Arts Department listing for information about the M.A.T. in Art Education and the School of Music listing for information about the M.A.T. in Music Education.

The Teaching and Learning Department offers endorsements in Gifted Education, Reading/Writing Specialist, and English as a Second Language (ESL). In addition, the Department offers extensions for teachers who wish to add another certification level or subject to their original certification. Check

with the department web site for additional information about these specialized programs.

The Master of Education degree is designed for certified teachers to pursue advanced studies in education. For certified teachers, the Department offers the Master of Education degree in Elementary, Middle School and Secondary Education, and non-degree Rank II and Rank I programs, all with choices of emphases in such areas as early childhood, literacy, mathematics, social studies, science, ESL and gifted education. There are also advanced programs leading to a Master of Education degree or a Rank I in Special Education, with options of specialties in Learning Behavior Disorders, Moderate and Severe Disabilities, Visual Impairment and Orientation and Mobility.

Students interested in a degree program beyond the Master's may also pursue the Doctor of Philosophy Degree in Curriculum and Instruction (Ph.D.) which has strands in Teaching and Learning and Special Education.

Doctor of Philosophy in Counseling and Personnel Services

Major Code: CPS

Degree Code: PHD

Unit: GE

Department Webpage: <http://www.louisville.edu/edu/ecpy>

Program Information Doctoral Program in College Student Personnel Counseling

Core (6 hours)

- ECPY 629 Theories and Techniques of Counseling & Psychotherapy (3)
- ECPY 650 Group Process and Practice (3)

Foundations (9 hours)

- ECPY 661 Theories of College Student Development (3) ¹
- ECPY 663 Multicultural Issues (3) ¹
- *plus one (1) additional course chosen with advisor (e.g., learning & human development courses – ECPY 705 Adult Development Theories, ECPY 631 Adolescence, ECPY 604 Human Development (3)*

Internship/Practicum (9 hours)

- ECPY 681 Internship in College Student Personnel Services (3) (2 courses @ 3 hours=6)
- ECPY 782 Doctoral Internship (3)

Note: appropriate previous experience may be substituted for one or both ECPY 681 internships upon approval of advisor and program committee.

Professional Specialty (Including electives – minimum 39 hours)

- ECPY 660 Intro to College student Personnel (3)
- ECPY 662 Student Affairs Programs, Practices, & Policies (3)
- ECPY 664 College student Subcultures (3) 1
- ECPY 695 Capstone Seminar in College student Personnel (3)
- (or advisor approved alternative, if appropriate)
- ELFH 682 Organization & Administration of Higher Educational Institutions (3) 1
- ECPY 793 Doctoral Seminar (3)
- plus 7 additional courses (21 hours) chosen in concert with advisor and program committee with consideration to the student's background, interests, and professional goals

Research/Statistics (minimum of 30 hours)

- ELFH 600 Introduction to Research and Statistics (3)
- ELFH 601 Applied Statistics (3)
- ECPY 700 Supervised Research (6) (*or advisor approved alternative research course*)
- ELFH 790 Dissertation Seminar (3)
- ECPY 761 Program Development & Evaluation (3)
- ELFH 795 Dissertation Research (12 hours)

Master of Education in Counseling and Personnel Services

Major Code: CPS

Degree Code: MED

Unit: GE

Department Webpage: <http://www.louisville.edu/edu/ecpy>

Program Information

The faculty and staff of the Department of Education and Counseling Psychology endeavor to cultivate exemplary professional practitioners and scholars in counseling, counseling psychology and college student development. The purpose of the department is to advance the knowledge base in these fields and to serve our diverse communities by drawing on our expertise in human development across the life span.

The Counseling Psychology Program prepares students at both the master's and doctoral-levels. The program, consistent with the mission of the University of Louisville, emphasizes the practice of psychology in metropolitan settings and promotes the values of social justice and equity through service to underserved urban populations. The Ph.D. program is accredited by the American Psychological Association.

The program utilizes the scientist practitioner model, which bases the practice of counseling psychology on a foundation of

research and critical inquiry. The Counseling Psychology curriculum at both the master’s and doctoral levels is designed to provide graduate education in psychology (articulated in the foundation courses) with a specialization in counseling psychology. The curriculum provides a sequence of training in theory, assessment, and intervention as well as a sequence of field experiences designed to help students integrate theory, research, and practice. The Counseling Psychology curriculum emphasizes ethical, empirically-based practice and research.

The M.Ed. program in Counseling Psychology prepares the student for credentialing in Kentucky as a Psychological Associate. The Ph.D. program prepares the student for credentialing in Kentucky as a Licensed Counseling Psychologist.

Program Admission Procedure

Complete an application for Graduate Admission. There is a copy in the application packet, or it can be filled out online at the Graduate School web site.

Pay your Application Fee of \$50 (US). If an online Application is completed, the application fee must be submitted by credit card with the on-line application.

Submit your official GRE scores.

Submit your official transcript(s) of each institution attending including an official transcript verifying the completion of a bachelor’s degree and any graduate coursework you may have completed. If you apply for admission to the Counseling Psychology program before completing your bachelor’s degree and are accepted into the program, you will not be allowed to register until you have submitted an official transcript indicating the completion of your degree.

Using the required form, solicit at least two letters of recommendation from individuals who can speak to your academic ability and your promise as a counseling professional.

Prepare a goal statement (word-processed) of 750 words explaining why you want to pursue a career in counseling psychology.

Application Deadlines

Summer and Fall Term – March 1
 Spring Term – October 1
 Fall Term – June 15 (if spaces in the program remain after March 1 admissions)

Program Curriculum Requirements

Course Number	Course Title	Credits
	General Requirement	
ELFH 600	Introduction to Research Methods & Statistics	3

ELFH 601	Applied Statistics	3
	Professional Area	
ECPY 540	Test & Measurements in Education	3
ECPY 600	Introduction to Counseling & Psychology	3
ECPY 611	Learning Systems	3
PSYC 620	Human Learning	3
ECPY 619	Theories of Counseling & Psychotherapy	3
ECPY 621	Differential Diagnosis & Treatment in Counseling	3
ECPY 629	Theories & Techniques of Counseling & Psychotherapy	3
ECPY 648	Psychological Assessment I	3
ECPY 649	Psychological Assessment II	3
ECPY 663	Multicultural Issues	3
ECPY 670	Career Development & Counseling	3
ECPY 680	Practicum (1 General and 1 Assessment)	1 - 8
ECPY 683	Internship in Counseling Psychology	1 - 3
ECPY 730	Social, Legal & Ethical Issues in Counseling	3
ECPY 775	Biological Bases of Behavior	3
	Select One Applied Therapy course from the following:	
ECPY 650	Group Process & Practice	3
	Family Assessment Concepts	3
ECPY 635	Seminar in Primary Prevention	3
ECPY 696	Seminar in Drug and Alcohol Counseling	3
		3
ECPY 696	Seminar in Crisis Intervention	

Master's in Education in Counseling & Personnel Services with Concentration in Expressive Therapies

Art therapy is a human service profession. It provides individuals and groups the means and support to express and explore feelings, thought, problems and potentials through the use of art media and imagery. It is utilized with any age and in areas such as medical illness, grief, educational and behavioral problems, emotional issues, and even criminal behavior. It is one of the nonverbal expressive therapies (along with dance, drama, music, and poetry therapy) where the process is emphasized rather than the product.

The Expressive Therapies master's degree program at U of L, began at the university in 1973, was the first art therapy university-based educational program established in the United States. It has been an American Art Therapy Association "approved" program since this designation was offered, and the curriculum adheres to the association's guidelines for education. The program is 60-credit-hour, two-year master's program.

For more information regarding the Expressive Therapies Program or for an application, e-mail us, or you can write or call:

Expressive Therapies
Room 320
College of Education and Human Development
University of Louisville
Louisville, Kentucky 40292
(502) 852-5265 or (502) 852-8798
Fax Number: (502) 852-0629
E-mail: etemail@louisville.edu

Program Admission Procedure

Admissions Process

The faculty of the Expressive Therapies program makes recommendations to the Graduate Dean for admission to the Graduate School. The following is a list of criteria for recommendation to our Master's program in Counseling & Personnel Services with a Concentration in Expressive Therapies.

Preliminary Screening

1. Priority screening of applications deadline is January 15 of each year which includes receipt of all credentials. However, applications are accepted throughout the year. Students are accepted into the Fall semester only.
2. Grade point average of 3.0-4.0 preferred on the undergraduate record. (Minimum requirement of 2.75 on a 4-point scale.)
3. Educational background that includes a Bachelor's degree with course work constituting a major in the Fine Arts, Performing Arts, or the Behavioral Sciences.

4. Experience in the helping professions, either paid or volunteer, is recommended.

5. Undergraduate prerequisites:

ART - 15 hours to include:

- a basic drawing course
- a course in painting
- a course using clay
- two other studio courses of your choice (many students take 2-D or 3-D design)

PSYCHOLOGY - 15 hours to include:

- general or intro to psychology
- developmental psychology
- abnormal psychology
- personality theory
- introductory statistics

All undergraduate prerequisite courses must be taken prior to beginning this graduate course of study. Applicants may be in the process of completing classes at the time of application. If you have any questions about prerequisite courses, please contact the Expressive Therapies Program.

6. Professional goal statement reflecting personal history, emotional maturity, understanding of the field of art therapy, life events which led applicant to enter the art therapy profession, and a statement of expected goals in this career field. The sketch should be 3-5 pages in length, typed and double spaced.

7. Graduate Record Examination (GRE), the general exam, or date applicant scheduled to take examination, is required. Recommended score: 800 or above on verbal & analytical, combined.

8. Letters of Recommendation (2) from at least two persons who know applicant academically or professionally.

9. Official transcripts from all universities/colleges attended.

10. Writing sample which reflects the student's ability to write a formal paper. A copy of a paper written for a previous class will do.

11. Slide portfolio of student's art work; 10 slides are recommended. The portfolio should contain a variety of media. Slides should be enclosed in a clear plastic sleeve.

12. Photograph of applicant--a snapshot will do.

13. Application and non refundable application fee of \$50.00 payable to University of Louisville

*Send one set of credentials except for the slide portfolio to the Office of Graduate Admissions, University of Louisville, Louisville, KY 40292. Send the full set of credentials, including the slide portfolio, but excluding the application fee, to:

Erica Camp, Program Assistant
Expressive Therapies Program

College of Education and Human Development
University of Louisville
Louisville, KY 40292

Preliminary Interview

If the candidate has fulfilled the above screening steps, he/she may be invited to meet with the faculty for an interview as part of the final screening process. During the interview the candidate will be assessed as follows:

- ability to formulate and communicate concepts and ideas clearly
- the visual and verbal expressiveness of the candidate's portfolio

Being invited to meet with the faculty is not a guarantee of a positive recommendation to the Graduate School. The successful candidate will be notified by the Director of the Expressive Therapies Program of a favorable recommendation to the Graduate Dean. The candidate is not, however, to assume admission on the basis of notification by anyone other than the Dean of the Graduate School. Consult your Graduate Catalog for general academic policies and requirements. Catalogs may be requested from the University of Louisville Office of Admissions.

Program Curriculum Requirements:

		Hrs
Core Professional Area (21 hours)		
ELFH 600	Introduction to Research	3
ECP Y 605	Human Development	3
ECP Y 629	Theories & Techniques of Counseling & Psychotherapy	3
ECP Y 650	Group Process & Practice	3
ECP Y 663	Multicultural Issues	3
ECP Y 670	Career Counseling	3
ECP Y 680	Practicum	3
Expressive Therapies Concentration (15 hours)		
ECP Y 632	Clinical Art Therapy I: Theories	3
ECP Y 633	Clinical Art Therapy II: Assessment and Practice	3
ECP Y 639	Research in Expressive Therapies	3

ECP Y 641	Applied Methods in Expressive Therapies	3
ECP Y 643	Field Studies in Art Therapy	3
The following course work must be completed in order to meet the educational requirements for credentialing as an art therapist (ATR, BC, CPAT)		
ECP Y 621	Differential Diagnosis & Treatment in Counseling	3
ECP Y 637	Expressive Techniques	3
ECP Y 642	Symbols of Self Actualization	3
ECP Y 680	Practicum	9
Total		60

Master's in Education in Counseling & Personnel Services with Concentration in College Student Personnel Services

The Department of Educational and Counseling Psychology offers both master's and doctoral degrees in education with an emphasis in College Student Personnel. These programs are designed to prepare professionals for positions in postsecondary education settings in college student affairs.

Theory and practice are critically important components of our programs, all of which share this common focus: preparation of professionals knowledgeable about college student development and administration in student affairs settings. Students are required to pursue a logical sequence of study that permits a well balanced preparation in theory, research, and field experiences in student affairs practice. College Student Personnel is one of five different program areas offered in the department.

The philosophical orientation of the programs provides students with knowledge of current roles and functions of student affairs professionals as well as a historical perspective of the field's development. The programs emphasize preparation of prospective student service professionals who are proficient in assessing and promoting growth and development of college students in postsecondary settings.

Graduates of our masters and doctoral programs have found employment in administrative positions in various student affairs areas, including vice presidents for student life and deans of students; directors of residence halls, residence hall complexes, and college/university student unions; coordinators of student activities, orientation, leadership, and Greek life; counselors in the areas of admissions, financial aid, and

career planning and placement; and advising positions with international students, students with disabilities, and academic services for athletes. Several have also obtained faculty positions.

Program Admission Procedure

- Complete an application for Graduate Admission. There is a copy in the application packet, or it can be filled out online at the Graduate School web site.
- Pay your Application Fee of \$50 (US). If an online Application is completed, the application fee must be submitted by credit card with the on-line application.
- Submit your official GRE scores. (combined verbal and quantitative score of 800)
- Applicants must have earned a minimum 2.75 grade point average (GPA) in an undergraduate degree from an accredited institution. If the applicant meets one of the above standards and does not meet the other (e.g., receives GRE scores between 700-799, or earned between a 2.50-2.74 GPA), he/she may be considered for admission on a conditional status. An official transcript from each institution attended must be submitted to the Office of Graduate Admissions.
- Using the required form, solicit at least two letters of recommendation from individuals who can speak to your academic ability and your promise as a counseling professional.
- Prepare a goal statement (word-processed) of not more than 750 words.

Application Deadlines

- Summer and Fall Term – March 1
- Spring Term – October 1
- Fall Term – June 15 (if spaces in the program remain after March 1 admissions)

Program Curriculum Requirements

	Course Information	Hours
ELFH 600	Introduction to Research	3
ELFH 682	Organization & Administration of Higher Education Institutes	3
ECPY 540	Evaluation & Measurement in Education	3
ECPY 600	Introduction to Counseling & Psychology	3
ECPY 605	Human Development	3
ECPY 619	Theories of Counseling & Psychology	3
ECPY 621	Differential Diagnosis & Treatment in Counseling	3

ECPY 626	Consultation	3
ECPY 629	Theories & Techniques of Counseling & Psychotherapy	3
ECPY 640	Assessment Methods for Counselors	3
ECPY 650	Group Process & Practice	3
ECPY 663	Multicultural Issues	3
ECPY 670	Career Counseling	3
ECPY 680	Practicum	3
ECPY 680	Practicum	3
ECPY 682	Internship in Mental Health Counseling	3
ECPY 730	Social, Legal, & Ethical Issues in Counseling	3
	Minimum Total:	45

Field Experience — Internship (ECPY 681)

As part of the 45 required credit hours, the CSP program provides the opportunity to gain exposure to and practical experience in the field of student affairs through two required internship field experiences (ECPY 681), each consisting of a minimum of 150 on site hours. Participation in the internship course earns 3 academic hours of credit for a total of 6 hours.

Master’s in Education in School Counseling & Guidance

The School Counseling and Guidance (M.Ed.) program prepares school counselors for positions in public or private elementary, middle, or secondary schools. The program is designed to fulfill entry-level program standards of preparation. It also is intended to enable program graduates to obtain Kentucky Department of Education Certification in School counseling. Emphasized in the program is the use of developmental perspectives by school counseling and guidance practitioner as outlined by the Kentucky Department of Education and the most innovative school counselor training standards as described by the professional literature.

Certification

University of Louisville students seeking Kentucky provisional school counseling certification must have:

- A Master's degree in school counseling or a Master's degree in education plus 24 credit hours in specific school counseling courses
- Kentucky teacher certification (or be Kentucky teacher certification eligible)
- One year of full time teaching experience
- Those without a teaching certificate and teaching experience may be eligible to be a school counselor in one of the many states that do not require teacher certification to be a school counselor (i.e., Indiana).

Credits in the School Counseling programs can be applied to requirements for Kentucky School Counselor Standard Certification, Rank I, and National Counseling Certification (NCC). Most credits also apply towards the Kentucky Licensed Professional Counselor Associate (LPCA) endorsement.

Program Admission Procedure

- Complete an application for Graduate Admission. There is a copy in the application packet, or it can be filled out online at the Graduate School web site.
- Pay your Application Fee of \$50 (US). If an online Application is completed, the application fee must be submitted by credit card with the on-line application.
- Submit your official GRE scores.
- Submit your official transcript(s) of all institutions attend and an official transcript verifying the completion of a bachelor's degree and any graduate coursework you may have completed. If you apply to admission to the Mental Health Counseling program before completing your bachelor's degree and are accepted into the program, you will not be allowed to register until you have submitted an official transcript indicating the completion of your degree.
- Using the required form, solicit at least two letters of recommendation from individuals who can speak to your academic ability and your promise as a mental health counselor.
- Prepare a goal statement (word-processed) of 750 words explaining why you want to pursue a career in mental health counseling.

Application Deadlines

- Summer and Fall Term – March 1
- Spring Term – October 1

Program Curriculum Requirements

	Course Information	Hours
ELFH 600	Introduction to Research Methods & Statistics	3

ECPY 540	Evaluation & Measurements	3
ECPY 600	Introduction to Counseling & Psychology	3
ECPY 605	Human Development	3
ECPY 631	Adolescence	3
ECPY 611	Learning Systems	3
PSYC 620	Human Learning	3
ECPY 619	Theories of Counseling & Psychotherapy	3
ECPY 621	Differential Diagnosis & Treatment in Counseling	3
ECPY 624	Organization and Administration of Secondary School Counseling	3
ECPY 625	Elementary School Counseling	3
ECPY 626	Consultation	3
ECPY 629	Theories & Techniques of Counseling & Psychotherapy	3
ECPY 640	Assessment Methods for Counselors	3
ECPY 650	Group Process & Practice	3
ECPY 651	Group Procedures with Children	3
ECPY 663	Multicultural Issues	3
ECPY 680	Practicum (3)	3
Total		18

Minimum Total: 54

Master's in Education in Counseling & Personnel Services with a Concentration in Mental Health Counseling

The coursework for this program fulfills the National Board for Certified Counselors (NBCC) educational requirements to sit for the exam for National Counselor Certification. A gradu-

ate of this program can apply to the Kentucky Board of Licensed Professional Counselors to have his/her credentials evaluated to become a licensed professional counselor associate (LPCA). LPCAs can engage in the practice of professional counseling in Kentucky under an approved clinical supervisor. LPCAs with appropriate supervised experience can apply to the Board to become a licensed professional clinical counselor (LPCC). An LPCC can engage in the independent practice of professional counseling in Kentucky.

This program is designed primarily for those individuals who wish to engage in the practice of professional counseling in a community-based setting. This program does not prepare students to counsel in a public school setting (see the M.Ed in School Counseling) or to do psychological assessments (see the M.Ed. in Counseling Psychology).

Program Admission Procedure

- Complete the Application for Graduate Admission.
- Pay your Application Fee of \$ 50 (US). If an online Application is completed, the application fee must be submitted by credit card with the on-line application.
- Submit your official GRE scores.
- Submit your official transcript(s) from each institution attended and an official transcript verifying the completion of a bachelor's degree and any graduate coursework you may have completed. If you apply to admission to the Mental Health Counseling program before completing your bachelor's degree and are accepted into the program, you will not be allowed to register until you have submitted an official transcript indicating the completion of your degree.
- Using the required form, solicit at least two letters of recommendation from individuals who can speak to your academic ability and your promise as a mental health counselor.
- Prepare a goal statement (word-processed) of 1500 words or less explaining why you want to pursue a career in mental health counseling
- A hard-copy application packet, including specific forms to be completed, is available from the Education Advising Center (502-852-5597).

Application materials should be submitted to the Graduate Admissions Office, Suite 105, Houchens Building, University of Louisville, Louisville, KY (40292).

For questions about the application process contact Rita Groves in the Education Advising Center (EAC) at 502-852-3213.

Once a student receives notice of acceptance into the program from the Graduate School, the student should contact his/her program advisor (as designated in the letter of acceptance) in order to put an official program of study on file.

Application Deadlines

- Spring Term – October 1
- Summer and Fall Terms – March 1

- Fall Term – June 15 (if spaces in the program remain after March 1 admissions)

For information about the content of the program, contact Dr. Nancy Cunningham, Professor and MHC Program Coordinator at 502-852-0626 or nancy.cunningham@louisville.edu.

Preadmission information meetings are held monthly in the fall and spring for individuals who wish to learn more about the masters programs in counseling including the Mental Health Counseling program. Call the Educational and Counseling Psychology (ECPY) office for information (502-852-6884).

Frequently Asked Questions

What types of jobs can I get with a degree in Counseling and Personnel Services with a Concentration in Mental Health Counseling?

Graduates of the program find employment in various human service and counseling agencies including mental health agencies, residential treatment centers, drug/alcohol treatment facilities, family resource and youth service centers, hospitals, employee assistance programs, and career placement centers. Graduates perform a variety of job tasks including individual and group counseling, intake assessments, program development, and consultation.

What type of credentialing is available to someone with a degree in Counseling and Personnel Services with a Concentration in Mental Health Counseling?

The coursework for this program fulfills the National Board for Certified Counselors (NBCC) educational requirements to sit for the exam for National Counselor Certification, a national exam that is used in many states (including Kentucky) as the exam required for counselor licensure. A graduate of the UofL program can apply to the Kentucky Board of Licensed Professional Counselors to have his/her credentials evaluated to become a licensed professional counselor associate (LPCA). LPCAs can engage in the practice of professional counseling in Kentucky under an approved clinical supervisor. LPCAs with 4000 hours of supervised experience can apply to the Board to become a licensed professional clinical counselor (LPCC). An LPCC can engage in the independent practice of professional counseling in Kentucky. To become a Licensed Mental Health Counselor (LMHC) in Indiana, an individual must have 1000 hours of supervised clinical experience within the academic program and 3000 hours of post-degree supervised clinical experience. (The coursework requirement for the LMHC is equivalent to the coursework requirement in Kentucky for the LPCC.) An individual who is planning to practice mental health counseling in a state other than Kentucky or Indiana should check with that state about requirements for counseling licensure.

How long does it take to complete the 60-credit hour program in Mental Health Counseling?

Students enroll in the Mental Health Counseling program both full and part time. Students enrolled fulltime (12 credit hours

per semester) can complete the program in five semesters. For part time students, completion of the program depends upon the number of credit hours taken per semester. Because certain courses need to be taken in sequence (culminating in two practicums and an internship), a student should meet with his/her faculty advisor early in the program to plan his/her course of study in order to graduate by a designated semester.

What is the difference between the masters program in Mental Health Counseling and the masters program in Counseling Psychology?

The masters program in Mental Health Counseling prepares a student to engage in the practice of professional counseling. The practice of professional counseling in Kentucky is governed by the Kentucky Board of Licensed Professional Counselors. Professional counseling services are defined by the Board as those “that involve the application of procedures including assessment, evaluation, treatment, planning, amelioration, and remediation of adjustment problems and emotional disorders, to assist individuals or groups to achieve more effective personal, social, education, or career development.” Professional counselors typically seek membership in the American Counseling Association (ACA) and its state affiliates (e.g. the Kentucky Counselors Association - KCA) and the American Mental Health Counseling Association (AMHCA) and its state affiliates (e.g. the Kentucky Mental Health Counselors Association - KMHCA).

The masters program in Counseling Psychology prepares a student to engage in the practice of psychology at the master’s level. The practice of psychology in Kentucky is governed by the Kentucky State Board of Psychology. Students who complete the masters program in Counseling Psychology can apply to the Kentucky State Board of Psychology for the psychological associate credential, which allows those credentialed to practice under the supervision of a licensed psychologist. In addition to those services provided by a licensed professional clinical counselor (LPCC), the licensed psychological associate is able to perform psychological assessments under the supervision of a licensed psychologist. The masters program in Counseling Psychology includes coursework and a practicum in psychological assessment that is not included in the masters program in Mental Health Counseling. The Kentucky Board of Psychology restricts the practice of psychological assessment to those who are credentialed to practice psychology and those who are exempt from such by the Board. Psychologists typically seek membership in the American Psychological Association (APA) and its state affiliates (e.g. the Kentucky Psychological Association – KPA).

Can I engage in the practice of professional counseling while I’m a student in the program?

Students are not allowed to practice professional counseling while enrolled in the Mental Health Counseling program unless they are enrolled in a supervised field experience. The law governing the licensure of clinical counselors in Kentucky states, “No person shall engage in the practice of professional counseling or present in a way as to imply or would reasonably

be deemed to imply licensure to practice professional counseling unless the person has first been issued a valid license by the board.” Students in the Mental Health Counseling program may engage in the practice of professional counseling when “pursuing a program of studies in counseling at an accredited institution of higher education, if these activities are performed under the supervision or direction of an approved supervisor and the activities are a part of the supervised program of study as reflected in an official transcript, and if the person is designated a professional counselor intern or student in training.” This does not apply to any person who is licensed, certified, or registered under any other provisions of the Kentucky Revised Statutes or to those who are employed in other forms of counseling as designated by the licensure law (e.g. employment counselors, job placement counselors, vocational rehabilitation counselors). Please see the law governing the licensure of Licensed Professional Clinical Counselors (LPCC) for more information.

Program Curriculum Requirements

The M.Ed. in Counseling and Personnel Services with a Concentration in Mental Health Counseling requires a minimum of 60 graduate credit hours distributed in the areas of study designated below. The program culminates in two counseling practicums and an internship in a community mental health setting. At least 700 hours of field placement must be completed during the field experience. A course in abnormal psychology is required as a prerequisite to the program.

General Requirements (3 credit hours):		Hours
ELFH 600	Introduction to Research Methods & Statistics	3
Professional Area (45 credit hours)		
ECPY 540	Evaluation & Measurement in Education	3
ECPY 600	Introduction to Counseling & Psychology	3
ECPY 605	Human Development	3
ECPY 619	Theories of Counseling & Psychotherapy	3
ECPY 621	Differential Diagnosis & Treatment in Counseling	3
ECPY 626	Consultation	3
ECPY 629	Theories & Techniques of Counseling & Psychotherapy	3
ECPY 640	Assessment Methods for Counselors	3
ECPY 650	Group Process & Practice	3

ECPY 663	Multicultural Issues	3
ECPY 670	Career Development & Counseling	3
ECPY 680	Practicum (1 General and 1 Assessment)	3
ECPY 680	Practicum (1 General and 1 Assessment)	3
ECPY 682	Internship in Mental Health Counseling	3
ECPY 730	Social, Legal & Ethical Issues in Counseling	3
Total		45

Electives in Designated Areas of study (12 credit hours)

15 credit hours of electives from the nine areas designated in the curriculum guidelines for the LPCA credential.

Students may transfer up to six graduate credit hours from a previous master's degree program or from another accredited institution that offers advanced degrees provided that the courses are equivalent to the required coursework in the M.Ed. in Counseling and Personnel Services with a Concentration in Mental Health Counseling. The student's academic advisor in consultation with other appropriate faculty will determine the equivalency of previous coursework.

Students are not allowed to practice professional counseling while enrolled in the Mental Health Counseling program unless they are enrolled in a supervised field experience. The law governing the licensure of clinical counselors in Kentucky states, "No person shall engage in the practice of professional counseling or present in a way as to imply or would reasonably be deemed to imply licensure to practice professional counseling unless the person has first been issued a valid license by the board." Students in the Mental Health Counseling program may engage in the practice of professional counseling when "pursuing a program of studies in counseling at an accredited institution of higher education, if these activities are performed under the supervision or direction of an approved supervisor and the activities are a part of the supervised program of study as reflected in an official transcript, and if the person is designated a professional counselor intern or student in training."

Academic Policies

For all programs in counseling and student personnel services, the student should exhibit those personal qualities and characteristics which, in the judgment of the faculty, are necessary for effective functioning in the role of judgment of the faculty, are necessary for effective functioning in the role of a counselor, psychologist, or student personnel worker. The faculty may require interviews in addition to written credentials as part of the admission process.

At any point after admission, the faculty reserves the right to review a student's fitness, on the basis of personal characteristics, for continuing in the counseling and student personnel program. Such as assessment shall be initiated upon the recommendation of two faculty members and shall consist of a review of the student's academic record, other pertinent evidence, and an interview with the student by the department faculty.

This review must result in a recommendation to the Dean for (1) continuation of a student in the program, (2) continuation for a specified professional period with specific conditions for continuation thereafter, or (3) dismissal from the program. Some courses may require learning experiences which focus on self-understanding or growth.

Tuition and Fees

Consult the Bursar's office web site or the hardcopy schedule of courses for the current tuition and fee schedule.

Scholarships/Financial Aid

UofL Student Financial Aid Office

The Student Loan People (Kentucky Higher Education Student Loan Corp.)

Doctor of Philosophy in Curriculum and Instruction

Major Code: EDCI

Degree Code: PHD

Unit: GE

Department Webpage: <http://www.louisville.edu/edu/index.htm>

Program Admission Procedure

- Admission to the Graduate School
- Admission by the Dept of Teaching and Learning Doctoral Committee

Curriculum Requirements

Knowledge Development and Utilization (24 hours)

- EDFD 601 Elementary Applied Statistics or equivalent (3)
- EDFD 701 (3)

A research course to aid in the completion of the dissertation

EDAP 790 Dissertation Seminar** (3)

EDAP 795 Dissertation Research¹ (12+)

Master of Arts in Teaching in Art Education

Major Code: EDAR

Degree Code: MAT

Unit: GE

Program Admission Procedure

1. Bachelor’s degree with a suggested 2.75 grade point average.
2. “C” or better in English 102, Speech Communication course.
3. Within 9 credits of completing content area with a 2.50 GPA or above in content area.
4. Admission to Teacher Education
5. Admission to the Graduate School and completion of official program with advisor.

Initial Assessment: Admission to Graduate School & Teacher Education

Course Prefix	Course Number	Course Title	Credits	Semester Offered F/S/U
*EDTP	602	Exploring Teaching Within the Socio-Cultural Context of P-12 Schools	3	F,S,U
*ECPY	607	Learning Theory and Human Growth and Development	3	F,S,U

(NOTE: The above two courses must be taken prior to or concurrent with the next two courses)

*ART	508	Art Education Methods/Research I	3	F
*ART	518	Art Education Methods/Research II	3	F

Mid-Point Assessment: Prior to Student Teaching: Satisfactory dispositions assessment; No lower than 2.0 in art education methods/research class; Within 3 credits of meeting content requirements; EDTP 602, ECPY 607, and ART 508 and 518 passed; Satisfactory mid-point portfolio; Positive recommendation from Middle/Secondary Program Committee.

Choose two from the following three student teaching courses:

*EDTP	615/616	Student Teaching Primary or Student Teaching Intermediate	6	S
*EDTP	617	Student Teaching Middle Grades		
*EDTP	619	Student Teaching Secondary		
*EDSP	545	Exceptional Child in the Regular Classroom	3	F,S,U

Certification Assessment: After Student Teaching: Satisfactory dispositions assessment; All certification course work* completed with 2.5 cumulative GPA; 2.5 cumulative GPA in content course requirements; 2.0 or higher in each student teaching; Satisfactory certification portfolio; Passing scores on required PRAXIS content and PLT exams; Positive recommendation from Middle/Secondary Program Committee.

EDTP	503	Developing Cross-Cultural Competence ¹	3	F,S,U
ART	5xx	Academic support course ¹	3	F,S,U
ART	5xx	Academic support course ¹	3	F,S,U
ART	5xx	Academic support course ¹	3	F,S,U
EDTP	620	Reading and Writing Across the Curriculum/ Adolescent Literature	3	F,S,U

¹ Can be taken at any point in the program
Minimum total hours 36

Master of Arts in Teaching in Early Elementary Education

Major Code: ERED

Degree Code: MAT

Unit: GE

Early Elementary Education (P-5)

Program Admission Procedure

1. Bachelor’s degree with a suggested 2.75 grade point average.
2. “C” or better in English 102, Speech Communications, passing grades in ART 407, MUS 525, HPES 274, MATH 151 and 152, one physical and one biological science course, one with a lab.

3. Admission to Teacher Education
4. Admission to the Graduate School and completion of official program with advisor.

Initial Assessment: Admission to Graduate School & Teacher Education, all pre-requisites met (except perhaps one).

Curriculum Requirements

Course Prefix	Course Number	Course Title	Credit Hours
*EDT P	602	Exploring Teaching Within the Socio-Cultural Context of P-12 Schools	3
*ECP Y	607	Learning Theory and Human Growth and Development	3
*EDT P	501	General Methods	3
(NOTE: The above three courses must be taken prior to any of the next 4 courses)			
*EDT P	603	Language Arts Methods	3
*EDT P	604	Mathematics Methods	3
*EDT P	605	Science Methods	3
*EDT P	606	Social Studies Methods	3
Point Assessment: Prior to Student Teaching: No lower than 2.0 in each content methods class; all pre-requisites met; all courses listed above passed; Positive recommendation from Elementary Program Committee (including assessment of dispositions and mid-program portfolio).			
*EDT P	615	Student Teaching (Primary)	3
*EDT P	616	Student Teaching (Intermediate)	3
*EDS P	545	Exceptional Child in the Regular Classroom	3
Certification Assessment: After Student Teaching: All certification course work* completed with 2.5 cumulative GPA; 2.0 or higher in each student teaching course; Passing scores on required PRAXIS and PLT exams; Positive recommendation from Elementary Program Committee (including assessment of dispositions and final certification portfolio).			
EDTP	503	Developing Cross-Cultural Competence 1	3

EDTP	504	Teaching with Technology 1	2
EDTP	505	Challenging Advanced Learners 2	1
1 Can be taken at any point in the program			
2 Must be taken concurrently with student teaching.			
* Course is required for certification			
Minimum total hours			36

***Master of Education in
Early Elementary Education***

Major Code: ERED
Degree Code: MED
Unit: GE

Elementary Education (P-5)

Program Admission Procedure

1. Holds certification in a P-5 area (required for M.Ed.)
2. Admission to Graduate School and
3. An official program sheet completed with advisor are required.

Curriculum Requirements

- **EDAP 606** Orientation and Readings (take in first semester of enrollment) (3)
- **ELFH 600** Introduction to Research Methods & Statistics (3)

Leadership and Change: (select one of the following courses)

- **EDAP 607** Leadership and Change (3)
- **ELFH 603** Administrative Leadership in a Reform Environment (3)
- **AP 624** Curriculum Theory (3)
- **EDAP 625** Social and Ethical Dev. of Teaching (3)

Success for All Learners : (select one of the following courses)

- **EDAP 642** Literacy Learning & Cultural Differences (3)
- **EDAP 626** Affirming Diversity (3)
- **EDTP 503** Developing Cross-Cultural Competence (3)

AREA OF EMPHASIS (AT LEAST 12 CREDITS)

EDAP 680 Capstone Course (3)

Elective (3)

Exit Requirements

- PORTFOLIO or
- MASTER'S THESIS (EDAP 699) (2-5)

Master of Education in Educational Administration

Major Code: EDAD

Degree Code: MED

Unit: GE

Department Webpage: <http://leader.louisville.edu/hre/index.htm>

General Information

This program is designed for students who wish to qualify for college administrative positions. It does not qualify graduates for Kentucky administration certification. This degree is also available for distance education through on-line instruction.

Program Admission Procedure

1. Application to Graduate School for this program

- Evidence of a Bachelor's Degree
- Official transcripts of all undergraduate and graduate work with minimum GPA of 2.75 on ALL COLLEGIATE PREPARATION
- Two recommendations (forms from Graduate School Application)
- Copy of teaching certification
- Evidence of successful teaching experience
- General Test Section score on the Graduate Record Examination of 800 (verbal + quantitative)
- Successful completion of the Kentucky Teacher Internship Program, as provided in 704 KAR 20:045, or two years (one year – a minimum of 140 contract days) of successful K-12 teaching experience outside of the state of Kentucky

No review begins until ALL required credentials are provided

2. Admission to the Program

- Department committee reviews application materials and makes recommendation to Graduate School

Curriculum

General Requirements

- ELFH 600 Introduction to research Methods and Statistics (3)
- ELFH 680 The American College and University (3) OR
- ELFH 681 Philosophy of Higher Education (3)

Professional Area

- ELFH 607 Principles of Educational Leadership (3)
- ELFH 626 Planning (3)
- ELFH 680 Legal Issues in Postsecondary Education
- ELFH 682 Organization and Administration of Higher Educational Institutions (3)
- ELFH 684 Educational Resource Management in Postsecondary Education (3)
- Electives (approved by advisor) (6)

Exit Requirements

- ELFH 690 Internship in Postsecondary Education (3) OR
- ELFH 699 Thesis or Professional Paper (4)

Doctor of Philosophy in Educational Leadership and Organizational Development

Major Code: ELOD

Degree Code: PHD

Unit: GE

Department Webpage: <http://leader.louisville.edu/hre/index.htm>

General Information

The program requires a minimum of 90 semester hours beyond the baccalaureate degree. Courses from previous graduate work may be counted toward the 90 hours. At least 45 of the 90 hours must be earned at U of L. These 45 hours will include the 18 hours fulfilling residency and the 12 hours required for dissertation credit. Students are limited to 15 hours of U of L coursework taken in non-degree status to be applied to the 90 hours

Each student will have a specialty in one of eight concentrations:

- P-12 administration,
- postsecondary administration,
- sport administration,
- human resource development,
- organizational leadership,
- instructional technology leadership,
- evaluation, or
- urban educational policy analysis.

Program Admission Procedure

Applicants must visit with the department Doctoral Coordinator or one of the faculty members for information before starting the application process. An admission packet with specific application directions are given to the applicant. After completion of tasks listed in the "Applicant Directions", the members of the department Admission Committee review the materials and make a recommendation to the Office of Graduate Admissions.

A summary of “Applicant Directions” includes (1) graduate application and \$50.00 non-refundable application fee, (2) resume or curriculum vita, (3) three recommendations for Graduate School admission, (4) General Record Examination test score of 1,000 (verbal + quantitative), (5) official transcripts, both undergraduate and graduate [GPA of 3.5 on 4.0 scale for previous degrees earned], and (6) formal statement of goals.

Master of Arts in Higher Education

Major Code: HED

Degree Code: MA

Unit: GE

General Information

Program Admission Procedure

1. Admission to Graduate School of Education

- Evidence of a Bachelor’s Degree
- Transcripts of all undergraduate and graduate work
- General Test Section score on the Graduate Record Examination of 800 (verbal + quantitative)

2. Admission to the Program

- Department committee reviews application materials and makes recommendation to Graduate School

General Requirements

- ELFH 600 Introduction to research Methods and Statistics (3)
- ELFH 678 The American College and University

Professional Area

- ELFH 607 Principles of Educational Leadership (3)
- ELFH 659 Planning (3)
- ELFH 680 Legal Issues in Postsecondary Education
- ELFH 682 Organization and Administration of Higher Educational Institutions (3)
- ELFH 684 Educational Resource Management in Postsecondary Education (3)
- Electives (approved by advisor) (6)

Exit Requirements

- ELFH 690 Internship in Postsecondary Education (3) OR
- ELFH 699 Thesis or Professional Paper (4)

Master of Arts in Higher Education with Concentration in Sport Administration

Professional Area (18 hours)

- EDAD 607 Principles of Educational Leadership (3)
- EDAD 620 Legal Issues in Education (3)
- EDAD 682 Organ. & Admin. of Higher Educ. Institutions (3)
- EDFD 600 Introduction to Research Methods & Statistics (3)
- EDFD 680 The American College and University (3) OR
- EDFD 681 The Philosophy of Higher Education (3)
- SPAD 625 Sport Administration (3)

Specialization Area (9 hours)

- SPAD 618 Rise of the Sport System in America (3) OR
- SPAD 680 Athletic in Higher Education (3)
- SPAD 505 Sport Facility Management (3) OR
- HPES 575 Administration of P.E. Programs & Athletics (3)
- SPAD 684 Current Trends & Issues in Sport Administration (3)
- SPAD Elective as approved by the advisor (3)

Exit Requirements (4-6 hours)

- ELFH 699 Thesis or Professional Paper (3) OR
- SPAD 692 Internship in Sport Administration (6)

Master of Science in Human Resource Education

Major Code: HRE

Degree Code: MS

Unit: GE

General Information

This program is designed to prepare or enhance individuals for a mid-level training and human resource positions in business, industry, health, military and education organizations. This degree is NOT acceptable for renewing a teaching certification or obtaining a Rank II salary status for Certified and Secondary Teachers.

Program Admission Procedure

Must be admitted to Graduate School, including passing scores on the Graduate Record Exam (verbal + quantitative)
What is required score?

M.S. in Human Resource Education

Core Courses (21-24 hours)

- ELFH 600 Introduction to Research Methods and statistics (3)
- ELFH 616 Internship and Portfolio Seminar (3-6)
- ELFH 605 Leading Training and Performance (3)
- ELFH 614 Planning and Evaluation (3)
- ELFH 662 Organizational Analysis (3)
- ELFH 664 Facilitating Change in Organizations (3)
- ELFH 672 Instructional Design and Development (3)

Electives: (choose 9 hours)

- ELFH 661 Adult Development & Learning Principles (3)
- ELFH 663 Methods of Facilitation (3)
- ELFH 671 Performance Interventions (3)
- ELFH 675 Web Use and Publishing (3)
- ELFH 676 Multimedia Authoring (3)
- ELFH 695 Distance Teaching and Learning (3)
- ELFH 640 Developing a Philosophy of Education (3)
- ELFH 641 Seminar (3)¹

¹Yearly semester long course aimed at advanced master & doctoral students. Topics such as Transformational Leadership, Consulting, Learning Research in Instructional Design, Workplace Learning.

Master of Education in Instructional Technology

Major Code: IT
Degree Code: MED
Unit: GE

General Information

Master, Rank I, second masters and teacher certificate endorsement are available. Graduates work in classroom, school, and district leadership positions in area school districts. They also work in minority, local, and national companies as instructional designers and developers.

This program is appropriate for P-12 teachers, as well as specialists in training and instructional design. The focus is applications of hardware, software, and instructional theory and curriculum, for the purpose of enhancing student learning. Preparation for various industry computer certifications is available for all. The Technology Leadership Institution is cohort group for JCPS.

Program Admission Procedure

- Admission to Graduate School of Education
- Graduate Record Examination test score of 800 (verbal + quantitative)

Curriculum

Prerequisites :

- EDTD 512 Occupational Analysis and Curriculum Development (3)
- EDTD 574 Computers and Technology for Training and Development (3)

Educational Computing & Technology Advising Option Requirements

Basic Professional Courses (6 hours)

- EDFD 600 Introduction to Graduate Studies in Education (3)
- EDFD 631 Social Context in Occupational Training and Development (3)

Area of Specialization (21 hours)

- EDTD 672 Instructional Design and Development (3)
- EDTD 675 Web Use & Publishing (3)
- EDTD 676 Authoring Multimedia Instruction (3)
- EDTD 695 Teleteaching and Distance Education (3)
- EDTD 640 Graduate Seminar in Human Resource Development (3)
- EDTD 615 Human Resource Development Internship (3) *

Electives (6 hours)

Minimum Hours: 36

* Culminating experience for the degree.

** For students with no background or experience in teaching, training or the design of instruction, one or more of the following prerequisites is recommended:

- EDTD 516 Methods of Teaching and Coordinating Occupational Education (3)
- EDTD 532 Assessment of Occupational Training and Development (3)

Master of Arts in Teaching in Middle School Education

Major Code: MSED
Degree Code: MAT
Unit: GE

General Information

The Department of Teaching and Learning offers two graduate degrees leading to initial certification. The Master of Arts in Teaching (M.A.T.) degree leads to initial certification in Early Elementary Education (P-5); Middle School Education (5-9); and Secondary Education (8-12). The Master of Arts in Teaching (M.A.T.) degree in Middle School Education specifically

leads to certification in Science, Social Studies, Mathematics, and English and Communications Education. The Master of Arts in Teaching (M.A.T.) degree in Secondary Education specifically leads to certification in Earth and Space Science, English, Biology, Chemistry, Mathematics, Social Studies, or Physics. There are also programs within Secondary Education leading to 5-12 certification in Business and Marketing Education and P-12 certification in French and Spanish.

The Master of Education degree leads to initial certification in Interdisciplinary Early Childhood Education; and Special Education (P-12) in the areas of Learning and Behavior Disorders (LBD); Moderate and Severe Disabilities (MSD); and Visual Impairment (VI).

Single Certification Area

Program Admission Procedure

1. Bachelor's degree with 2.75 grade point average.
2. "C" or better in writing course and a speech communication course.
3. Admission to Teacher Education
4. Within 9 credits of completing content area with a 2.50 GPA or above in content area.
5. PRAXIS Content Exam has been taken.
6. Admission to the Graduate School and completion of official program with advisor.

Initial Assessment: Admission to Graduate School and Teacher Education

Curriculum

COURSE PREFIX	COURSE NUMBER	COURSE TITLE	CREDITS	SEMESTER OFFERED F/S/U
*EDTP	602	Exploring Teaching Within the Socio-Cultural Context of P-12 Schools	3	F,S,U
*ECPY	607	Learning Theory and Human Growth and Development	3	F,S,U
*EDTP	501	General Methods	3	F,S,U

(NOTE: The above three courses must be taken prior to either of the next 2 courses)				
*EDTP	607	Middle Grades Methods I	3	F
*EDSP	545	Exceptional Child in the Regular Classroom	3	F,S,U
Mid-Point Assessment: Prior to Student Teaching: Satisfactory dispositions assessment; No lower than 2.0 GPA in content methods class; Within 3 credits of meeting content requirements; ECPY 607 and EDTP 602, 501, 607 passed; Satisfactory mid-point portfolio; Positive recommendation from Middle/Secondary Program Committee.				
*EDTP	617	Middle Grades Student Teaching I	3	S
*EDTP	618	Middle Grades Student Teaching II	3	S
Certification Assessment: After Student Teaching: Satisfactory dispositions assessment; All certification course work completed with 2.5 cumulative GPA; 2.5 cumulative GPA in content course requirements; 2.0 GPA or higher in each student teaching; Satisfactory certification portfolio; Passing scores on PRAXIS content and PLT exams; Positive recommendation from Middle/Secondary Program Committee.				
EDTP	503	Developing Cross-Cultural Competence ¹	3	F,S,U
EDTP	504	Teaching with Technology ¹	2	F,S,U
EDTP	505	Challenging Advanced Learners ²	1	F,S
EDTP	620	Reading and Writing Across the Curriculum/Adolescent Literature ¹	3	F,S,U
¹ Can be taken at any point in the program				
² Must be taken concurrently with student teaching.				
Minimum total hours			30	

Double Certification Area

Program Admission Procedure

1. Bachelor's degree with a 2.75 grade point average.
2. "C" or better in writing course and a speech communication course.
3. Admission to Teacher Education
4. Within 9 credits of completing content area with a 2.50 GPA or above in content area.
5. PRAXIS Content Exam has been taken.
6. Admission to the Graduate School and completion of official program with advisor.

Initial Assessment: Admission to Graduate School & Teacher Education

Curriculum

CO UR SE PRE FIX	CO UR SE NU MB ER	COURSE TITLE	CR ED IT H O U RS	SEMES- TER OFFERED F/S/U
*ED TP	602	Exploring Teaching Within the Socio-Cultural Context of P-12 Schools	3	F,S,U
*EC PY	607	Learning Theory and Human Growth and Development	3	F,S,U
*ED TP	501	General Methods	3	F,S,U
(NOTE: The above three courses must be taken prior to either of the next 2 courses)				
*ED TP	607	Middle Grades Methods I	3	F
*ED TP	608	Middle Grades Methods II	3	F
*ED SP	545	Exceptional Child in the Regular Classroom	3	F,S,U

Mid-Point Assessment: Prior to Student Teaching: Satisfactory dispositions assessment; No lower than 2.0 GPA in either content methods class; Within 3 credits of meeting content requirements; ECPY 607 and EDTP 602, 501, 607, 608 passed; Satisfactory mid-point portfolio; Positive recommendation from Middle/Secondary Program Committee.

*ED TP	617	Middle Grades Student Teaching I	3	S
*ED TP	618	Middle Grades Student Teaching II	3	S

Certification Assessment: After Student Teaching: Satisfactory dispositions assessment; All certification course work completed with 2.5 cumulative GPA; 2.5 cumulative GPA in content course requirements; 2.0 GPA or higher in each student teaching; Satisfactory certification portfolio; Passing scores on PRAXIS content and PLT exams; Positive recommendation from Middle/Secondary Program Committee.

ED TP	503	Developing Cross-Cultural Competence ¹	3	F,S,U
ED TP	504	Teaching with Technology ¹	2	F,S,U
ED TP	505	Challenging Advanced Learners ²	1	F,S
ED TP	620	Reading and Writing Across the Curriculum/Adolescent Literature ¹	3	F,S,U

¹ Can be taken at any point in the program

² Must be taken concurrently with student teaching.

Minimum total hours	33	
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Alternative Certification Route

Program Admission Procedure

1. Admission to Graduate School & Teacher Education,
2. Within 6 credits of completing content area
3. Passing scores on the content PRAXIS test(s),
4. Current employment as a full-time temporary provisional teacher

Initial Assessment: Admission to Graduate School & Teacher Education, Passing scores on the content PRAXIS test(s), Current employment as a full-time temporary provisional teacher

Curriculum

COURSE PREFIX	COURSE NUMBER	COURSE TITLE	CREDITS	SEMESTER OFFERED
EDTP	631	Integrated Teaching and Learning I	3	U
EDTP	632	Integrated Teaching and Learning II	3	U
EDTP	607	Middle Grades Methods I	3	F
EDTP	633	Integrated Teaching and Learning III	3	S
EDTP	617	Middle Grades Student Teaching I	3	S
Mid-Point Assessment Satisfactory dispositions assessment; 2.5 cumulative GPA; 2.5 cumulative GPA in content course requirements; 2.0 or higher in student teaching; Satisfactory certification portfolio; Positive recommendation from Middle/Secondary Program Committee.				
EDTP	620	Reading and Writing Across the Curriculum/Adolescent Literature	3	F,S,U
EDTP	678	Supporting the Intern Teacher I	3	F
EDTP	504	Teaching with Technology	2	F,S,U
EDTP	505	Challenging Advanced Learners	1	F,S
EDTP	679	Supporting the Intern Teacher II	3	S
EDTP	503	Developing Cross-Cultural Competence	3	F,S,U
Minimum total hours 30				

Master of Education in Middle School Education

Major Code: MSED
Degree Code: MED
Unit: GE

Program Admission Procedure

- Holds certification in a 5-9 area.
- Admission to Graduate School, and
- completion of Official Program with advisor are required.

Curriculum Requirements

- EDAP 606 Orientation and Readings (take in first semester of enrollment) (3)
- ELFH 600 Introduction to Research Methods & Statistics (3)

Leadership and Change: (select one of the following courses)

- EDAP 607 Leadership and Change (3)
- ELFH 603 Administrative Leadership in a Reform Environment (3)
- EDTP 624 Curriculum Theory (3)
- EDAP 625 Social and Ethical Dev. of Teaching (3)

Success for All Learners : (select one of the following courses)

- EDAP 642 Literacy Learning & Cultural Differences (3)
- EDAP 626 Affirming Diversity (3)
- EDTP 503 Developing Cross-Cultural Competence (3)

AREA OF EMPHASIS (AT LEAST 12 CREDITS)

EDAP 680 Capstone Course (3)

Elective (3)

Exit Requirements

- PORTFOLIO, Or
- MASTER'S THESIS (EDAP 699) (2-5)

Master of Arts in Teaching in Music Education

Major Code: EDMU
Degree Code: MAT
Unit: GE

General Information

In addition to the general degree requirements described in the General Information section of the Graduate Catalogue, the following degree requirements must be met:

- The student shall obtain permission from the Graduate Division Committee to begin work at the graduate level.
- All students must qualify for non-conditional status no later than the end of the second semester of full-time residence, or before eighteen (18) semester hours have been completed. To qualify for degree candidacy the student must have: (a) proof that all deficiencies in music history, literature and the-

ory have been removed, (b) an academic record with a minimum of nine (9) hours of graduate credit with a grade point average of 3.0, (c) an inclusive program of studies fulfilling the requirements of a master's curriculum, approved by the major professor and the departmental chairperson; (d) in the case of a program requiring a master's thesis or professional paper, a proposed topic for the thesis or paper and a proposed membership for a reading committee to provide guidance during the writing of the thesis or paper. [

- As per the Graduate School requirements, at least half of the required credits for the master's degree must be at the 600 level, excluding thesis, internships, or practicums;
- In order to be in good standing, graduate students must have a 3.0 grade point average. A student must be in good standing in order to graduate. No more than six (6) hours with any "C" or "C+" grade will be accepted toward a degree, and no grade below a "B-" will be accepted in a major subject. A student whose cumulative GPA falls below 3.0 will be placed on probation by the Graduate School. Students are ordinarily not permitted to remain on probation for more than one semester.
- The School of Music does not accept transfer grades below a "B". No credit is transferred for applied music. Advanced standing for applied music may be awarded at a jury. Music history and theory credits will be evaluated for transfer by the Director of Graduate Studies and the respective faculty. Ensemble credits appropriate to the new degree program may be considered for transfer, but not to exceed one per semester.
- All students are required to pass an oral examination given by the Graduate Committee before the end of the semester in which the degree is to be granted. It may cover all areas of endeavor undertaken by the student in his graduate program or believed essential to the student's background.
- A candidate who fails the oral examination at the end of a semester may not be given a second one before the regular time for such an examination at the end of the next semester or summer session. A candidate who fails in the second oral examination shall not be granted the degree from this university.
- Part-time students (with the exception of those in M.M.E. degree programs) must participate in one ensemble for each 18 hours of course work completed. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.
- Transfer of more than 6 hours from a degree program of an accredited institution in which a degree has been previously earned will only be granted on recommendation of the student's division and approval of the Director of Graduate Studies in consultation with the Graduate Committee. The request will be considered provided that the additional hours have not been earned by extension and that the University of Louisville minimum residency requirements have been met as stated in the Graduate Catalogue.
- Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested with the restriction that the minimum residency requirement be maintained in compliance with the Graduate Catalogue.
- Hours earned beyond the minimum in any one curricular

area apply only to that area and cannot be divided in order to satisfy a requirement in another area.

Admission Requirements

In addition to the general requirements for admission to the Graduate School, the following specific requirements must be met:

- To be admitted to the Graduate Division of the School of Music, the applicant should possess a baccalaureate degree in the area (or an equivalent one) to be pursued in advanced studies.
- Applicants must meet the specific entrance requirements established by the major department.
- Applicants are required to take entrance examinations in music history, literature, and theory. Students may be required to take, without credit, courses in which they are deficient as indicated by the examination results.
- Graduate applicants to the School of Music must submit GRE scores with the application form.

The School of Music provides each student with guidelines to assist in preparation for the entrance exams and a copy of the Handbook for Graduate Music Students. Students are expected to read the School of Music handbook and the University Graduate Catalog and to follow regulations and procedures regarding their specific degree program at the University of Louisville. In particular, students are advised to observe the request for submitting GRE scores for admission to the Graduate School. Graduate study in music begins with the preparation for the entrance examinations in Music History and Music Theory and concludes with the graduate oral exam that is taken when all requirements have been met.

Program Information

Program Curriculum Requirements

Prerequisites

- Bachelor or Music Education, Pre-certification requirements, or equivalent.
- Admission to Graduate School.
- Admission to Teacher Education.
- Completion of Learning Theory and Human Growth and Development (ECPY 607) and Exploring Teaching Within the Socio-Cultural Context of P-12 Schools (EDTL 502/602).
- Successful music audition.
- PRAXIS must be taken prior to admission to the M.A.T. Program
- ACT of 21 (minimum) or equivalent.
- GRE scores.

Curriculum

	Hours
Either Pre-Student Teaching (MUED 605): Orientation and General Methods (Vocal)* or Pre-Student Teaching (MUED 606): Orientation and General Methods (Instrumental)*	3
* Note: Students are strongly encouraged to take either MUED 605 (Vocal) or MUED 606 (Instrumental) in accordance with their degree emphasis prior to student teaching.	
Qualitative Research Methods (MUED 618)	2
Foundations of Music Education (MUED 629)	2
Quantitative Research Methods (MUED 630)	2
Learning Theories in Music Education (MUED 639)	2
Applied Music (MUS 611) OR Conducting (MUS 659)	2
Applied Music (MUS 612) OR Conducting (MUS 660)	2
Exit Requirement	
Student Teaching Seminar (MUED 607)	2
Student Teaching Seminar (MUED 608)	2
Capstone Seminar (MUED 609)	3
Music Student Teaching: Elementary/Secondary I (MUED 610)	4
Music Student Teaching: Elementary/Secondary II (MUED 611)	4
Minimum Total	30

Other Requirement

PRAXIS Exam must be passed for certification and conferral of the M.A.T. degree in Music Education. Passing all KDE-required PRAXIS subtests is necessary for certification.

Master of Education in Reading Education

Major Code: RE

Degree Code: MED

Unit: GE

General Information

Reading Education. Provides Endorsement as a Reading/Writing Specialist for those holding certification in P-5, 5-9 or 8-12

Program Admission Procedure

- Admission to Graduate School
- Candidates for this program must have a valid regular education teaching certificate (P-5, 5-9, 8-12)

Curriculum Requirements

Required Core : (6 hours)

- EDAP 624Curriculum Theory (3)
- ELFH 600Introduction to Research Methods & Statistics (3)

Required Literacy : (15-18 hours)

- EDAP 610 Literacy Research & Theory (3) (must be taken in first 9 hours)
- EDAP 614 Helping Struggling Readers and Writers K-12 (3)
- EDAP 615 Measurement and Evaluation in Literacy (3)
- EDAP 642 Literacy Learning and Cultural Differences (3)
- EDAP 612 Louisville Writing Project (must apply) (6) OR
- EDAP 644 The Authoring Cycle (3) OR
- EDAP 647 Teaching Writing and Language in Secondary School (3)

Literacy Electives : (3 to 6 hours)

- These courses will be selected from courses according to Kentucky Department of Education State Guidelines (IIIB) for Preparation of Reading Specialist.

Capstone Experience : (3 hours)

- EDAP 618 Practicum in Literacy (3) (Exit Requirement)

Master of Arts in Teaching in Secondary Education

Major Code: SE

Degree Code: MAT

Unit: GE

Secondary School (8-12)

Program Admission Procedure

1. Bachelor's degree with 2.75 grade point average.
2. "C" or better in writing course and a speech communication course.

3. Within 9 credits of completing content area with a 2.50 GPA or above in content area.
4. Admission to Teacher Education
5. Admission to the Graduate School and completion of official program with advisor.

Initial Assessment: Admission to Graduate School & Teacher Education

Curriculum

CO UR SE PR EFI X	CO UR SE NU MB ER	COURSE TITLE	CR ED IT HO UR S	SEME STER OFFE RED F/S/U
*E DT P	602	Exploring Teaching Within the Socio-Cultural Context of P-12 Schools	3	F,S,U
*E CP Y	607	Learning Theory and Human Growth and Development	3	F,S,U
*E DT P	501	General Methods	3	F,S,U
(NOTE: The above three courses must be taken prior to Methods Course)				
*E DT P	609	Special Methods in Secondary Education (in teaching field)	3	F
*E DS P	545	Exceptional Child in the Regular Classroom	3	F,S,U
Mid-Point Assessment: Prior to Student Teaching: Satisfactory dispositions assessment; No lower than 2.0 in content special methods class; Within 3 credits of meeting content requirements; ECPY 606 and EDTP 602, 501, 609 passed; Satisfactory mid-point portfolio; Positive recommendation from Middle/Secondary Program Committee.				
*E DT P	619	Secondary Student Teaching	6	S

Certification Assessment: After Student Teaching: Satisfactory dispositions assessment; All certification course work* completed with 2.5 cumulative GPA; 2.5 cumulative GPA in content course requirements; 2.0 or higher in student teaching; Satisfactory certification portfolio; Passing scores on PRAXIS content and PLT exams; Positive recommendation from Middle/Secondary Program Committee.				
		Academic support course ¹ :	3	F,S,U
		Academic support course ¹ :	3	F,S,U
ED TP	503	Developing Cross-Cultural Competence ¹	3	F,S,U
ED TP	504	Teaching with Technology ¹	2	F,S,U
ED TP	505	Challenging Advanced Learners ²	1	F,S
ED TP	620	Reading and Writing Across the Curriculum/ Adolescent Literature ¹	3	F,S,U
¹ Can be taken at any point in the program				
² Must be taken concurrently with student teaching.				
Minimum total hours			36	

Secondary School (8-12) (Alternative Route)

Program Admission Procedure

1. Admission to Graduate School & Teacher Education,
2. Within 6 credits of completing content area
3. Passing scores on the content PRAXIS test(s),
4. Current employment as a full-time temporary provisional teacher

Initial Assessment: Admission to Graduate School & Teacher Education, Passing scores on the content PRAXIS test(s), Current employment as a full-time temporary provisional teacher.

Curriculum

CO URS E PRE FIX	COU RSE NU MBE R	COURSE TITLE	CREDIT HOURS	SEME STER OFFE RED
EDT P	631	Integrated Teaching and Learning I	3	U
EDT P	632	Integrated Teaching and Learning II	3	U
EDT P	609	Special Meth- ods in Second- ary Education (in teaching field)	3	F
EDT P	633	Integrated Teaching and Learning III	3	S
EDT P	619	Secondary Stu- dent Teaching	3	S
Mid-Point Assessment : Satisfactory dispositions assessment; 2.5 cumulative GPA; 2.5 cumulative GPA in content course requirements; 2.0 or higher in student teaching; Satisfactory certification portfolio; Positive recommendation from Middle/Secondary Program Committee.				
EDT P	620	Reading and Writing Across the Curriculum/ Adolescent Lit- erature	3	F,S,U
EDT P	678	Supporting the Intern Teacher I	3	F
EDT P	504	Teaching with Technology	2	F, S,U
EDT P	505	Challenging Advanced Learners	1	F, S
EDT P	679	Supporting the Intern Teacher II	3	S
EDT P	503	Developing Cross-Cultural Competence	3	F,S,U
Minimum total hours 30				

Business & Marketing 5-12

Program Admission Procedure

1. Bachelor's degree with a 2.75 grade point average.

2. "C" or better in writing course and a speech communication course.

3. Within 9 credits of completing content area with a 2.50 GPA or above in content area.

4. PRAXIS exam needs to be taken.

5. Admission to Teacher Education

6. Admission to the Graduate School and completion of official program with advisor.

Initial Assessment: Admission to Graduate School & Teacher Education

Curriculum

CO UR SE PR EF IX	CO URS E NU MB ER	COURSE TITLE	C RE DI T H O U RS	SEM EST ER OFF ERE D F/ S/U
*E DT P	602	Exploring Teaching Within the Socio-Cul- tural Context of P-12 Schools	3	F,S,U
*E CP Y	607	Learning Theory and Human Growth and Development	3	F,S,U
*E DT P	501	General Methods	3	F,S,U
(NOTE: The above three courses must be taken prior to Methods Course)				
*E DT P	609	Special Methods in Secondary Education (in teaching field)	3	F
*E DS P	545	Exceptional Child in the Regular Class- room	3	F,S,U
Mid-Point Assessment: Prior to Student Teaching: Satisfactory dispositions assessment; No lower than 2.0 in content special methods class; Within 3 credits of meeting content requirements; ECPY 607 and EDTP 602, 501, 609 passed; Satisfactory mid-point portfolio; Positive recommendation from Middle/Secondary Program Committee.				
*E DT P	619	Secondary Student Teaching	6	S

Certification Assessment: After Student Teaching: Satisfactory dispositions assessment; All certification course work* completed with 2.5 cumulative GPA; 2.5 cumulative GPA in content course requirements; 2.0 or higher in student teaching; Satisfactory certification portfolio; Passing scores on PRAXIS content and PLT exams; Positive recommendation from Middle/Secondary Program Committee.				
		Academic support course ¹ :	3	F,S,U
		Academic support course ¹ :	3	F,S,U
ED TP	503	Developing Cross-Cultural Competence ¹	3	F,S,U
ED TP	504	Teaching with Technology ¹	2	F,S,U
ED TP	505	Challenging Advanced Learners ²	1	F,S
ED TP	620	Reading and Writing Across the Curriculum/Adolescent Literature ¹	3	F,S,U
¹ Can be taken at any point in the program				
² Must be taken concurrently with student teaching.				
Minimum total hours			36	

Certification in Business/Marketing (5-12) (Alternative Route)

Program Admission Procedure

1. Admission to Graduate School & Teacher Education,
2. Within 6 credits of completing content area
3. Passing scores on the content PRAXIS test(s)
4. Current employment as a full-time temporary provisional teacher

Initial Assessment: Admission to Graduate School & Teacher Education, Passing scores on the content PRAXIS test(s), Current employment as a full-time temporary provisional teacher.

Curriculum

CO UR SE PR EFI X	CO URS E NU MB ER	COURSE TITLE	CR ED IT HO URS	SEME STER OFFE RED
ED TP	631	Integrated Teaching and Learning I	3	U
ED TP	632	Integrated Teaching and Learning II	3	U
ED TP	609	Special Methods in Secondary Education (in teaching field)	3	F
ED TP	633	Integrated Teaching and Learning III	3	S
ED TP	619	Secondary Student Teaching	3	S
Mid-Point Assessment : Satisfactory dispositions assessment; 2.5 cumulative GPA; 2.5 cumulative GPA in content course requirements; 2.0 or higher in student teaching; Satisfactory certification portfolio; Positive recommendation from Middle/Secondary Program Committee.				
ED TP	620	Reading and Writing Across the Curriculum/Adolescent Literature	3	F,S,U
ED TP	678	Supporting the Intern Teacher I	3	F
ED TP	504	Teaching with Technology	2	F, S,U
ED TP	505	Challenging Advanced Learners	1	F, S
ED TP	679	Supporting the Intern Teacher II	3	S
ED TP	503	Developing Cross-Cultural Competence	3	F,S,U
Minimum total hours 30				

Foreign Language P-12

Program Admission Procedure

1. Bachelor's degree with 2.75 grade point average.
2. "C" or better in writing course and a speech communication course.

3. Within 9 credits of completing content area with a 2.50 GPA or above in content area.
4. Admission to Teacher Education
5. Admission to the Graduate School and completion of official program with advisor.

Initial Assessment: Admission to Graduate School & Teacher Education

Curriculum

COURSE PREFIX	COURSE NUMBER	COURSE TITLE	CREDITS	SEMESTER OFFERED
*EDTP	602	Exploring Teaching Within the Socio-Cultural Context of P-12 Schools	3	F,S,U
*ECPY	607	Learning Theory and Human Growth and Development	3	F,S,U
*EDTP	501	General Methods	3	F,S,U
(NOTE: The above three courses must be taken prior to Methods Course)				
*EDTP	609	Special Methods in Secondary Education (in teaching field)	3	F
*EDSP	545	Exceptional Child in the Regular Classroom	3	F,S,U
<p>Mid-Point Assessment: Prior to Student Teaching: Satisfactory dispositions assessment; No lower than 2.0 in content special methods class; Within 3 credits of meeting content requirements; ECPY 607, EDTP 602, 501, 609 passed; Satisfactory mid-point portfolio; Positive recommendation from Middle/Secondary Program Committee.</p>				
<p>Choose two from the following three student teaching courses:</p>				

*EDTP	615/616	Student Teaching Primary or Student teaching Intermediate	6	S
*EDTP	617	Student Teaching Middle Grades		
*EDTP	619	Student Teaching Secondary		
<p>Certification Assessment: After Student Teaching: Satisfactory dispositions assessment; All certification course work* completed with 2.5 cumulative GPA; 2.5 cumulative GPA in content course requirements; 2.0 or higher in student teaching; Satisfactory certification portfolio; Passing scores on PRAXIS content and PLT exams; Positive recommendation from Middle/Secondary Program Committee.</p>				
		Academic support course ¹ :	3	F,S,U
		Academic support course ¹ :	3	F,S,U
EDTP	503	Developing Cross-Cultural Competence ¹	3	F,S,U
EDTP	504	Teaching with Technology ¹	2	F,S,U
EDTP	505	Challenging Advanced Learners ²	1	F,S
EDTP	620	Reading and Writing Across the Curriculum/ Adolescent Literature ¹	3	F,S,U
<p>¹ Can be taken at any point in the program ² Must be taken concurrently with student teaching.</p>				
Minimum total hours			36	

P-12 Certification in Foreign Language

Program Admission Procedure

1. Bachelor’s degree with a 2.75 grade point average.
2. “C” or better in writing course and a speech communication course.
3. Within 9 credits of completing content area with a 2.50 GPA or above in content area.

4. Has taken PRAXIS Exam.
5. Admission to Teacher Education
6. Admission to the Graduate School and completion of official program with advisor.

Initial Assessment: Admission to Graduate School & Teacher Education, Passing scores on the content PRAXIS test(s), Current employment as a full-time temporary provisional teacher.

Curriculum

CO UR SE PR EFI X	CO URS E NU MB ER	COURSE TITLE	CR ED IT HO UR S	SEME STER OFFE RED
ED TP	631	Integrated Teaching and Learning I	3	
ED TP	632	Integrated Teaching and Learning II	3	
ED TP	609	Special Methods in Secondary Education (in teaching field)	3	
ED TP	633	Integrated Teaching and Learning III	3	
ED TP	619	Secondary Student Teaching	3	
Mid-Point Assessment : Satisfactory dispositions assessment; 2.5 cumulative GPA; 2.5 cumulative GPA in content course requirements; 2.0 or higher in student teaching; Satisfactory certification portfolio; Positive recommendation from Middle/Secondary Program Committee.				
ED TP	620	Reading and Writing Across the Curriculum/Adolescent Literature	3	
ED TP	678	Supporting the Intern Teacher I	3	
ED TP	504	Teaching with Technology	2	
ED TP	505	Challenging Advanced Learners	1	
ED TP	679	Supporting the Intern Teacher II	3	
ED TP	503	Developing Cross-Cultural Competence	3	
Minimum total hours 30				

P-12 Certification in Foreign Language (Alternative Route)

Program Admission Procedure

1. Admission to Graduate School & Teacher Education
2. Passing scores on the content PRAXIS test(s),
3. Within 6 credits of completing content area
4. Current employment as a full-time temporary provisional teacher

Initial Assessment: Admission to Graduate School & Teacher Education, Passing scores on the content PRAXIS test(s), Current employment as a full-time temporary provisional teacher.

Curriculum

CO UR SE PR EFI X	CO URS E NU MB ER	COURSE TITLE	CR ED IT HO UR S	SEME STER OFFE RED
ED TP	631	Integrated Teaching and Learning I	3	U
ED TP	632	Integrated Teaching and Learning II	3	U
ED TP	609	Special Methods in Secondary Education (in teaching field)	3	F
ED TP	633	Integrated Teaching and Learning III	3	S
ED TP	619	Secondary Student Teaching	3	S
Mid-Point Assessment : Satisfactory dispositions assessment; 2.5 cumulative GPA; 2.5 cumulative GPA in content course requirements; 2.0 or higher in student teaching; Satisfactory certification portfolio; Positive recommendation from Middle/Secondary Program Committee.				
ED TP	620	Reading and Writing Across the Curriculum/Adolescent Literature	3	F,S,U
ED TP	678	Supporting the Intern Teacher I	3	F
ED TP	504	Teaching with Technology	2	F, S,U
ED TP	505	Challenging Advanced Learners	1	F, S

ED TP	679	Supporting the Intern Teacher II	3	S
ED TP	503	Developing Cross-Cultural Competence	3	F,S,U
Minimum total hours 30				

Master of Education in Secondary Education

Major Code: SE

Degree Code: MED

Unit: GE

Program Admission Procedure

1. Holds certification in an 8-12 area.
2. Admission to Graduate School and
3. Completion of an official program are required.

Curriculum Requirements

- EDAP 606 Orientation and Readings (take in first semester of enrollment) (3)
- ELFH 600 Introduction to Research Methods & Statistics (3)

Leadership and Change: (select one of the following courses)

- EDAP 607 Leadership and Change (3)
- ELFH 603 Administrative Leadership in a Reform Environment (3)
- EDAP 624 Curriculum Theory (3)
- EDAP 625 Social and Ethical Dev. of Teaching (3)

Success for All Learners : (select one of the following courses)

- EDAP 642 Literacy Learning & Cultural Differences (3)
- EDAP 626 Affirming Diversity (3)
- EDTP 503 Developing Cross-Cultural Competence (3)

AREA OF EMPHASIS (AT LEAST 12 CREDITS)

- EDAP 680 Capstone Course (3)
- Elective (3)

Exit Requirements

- PORTFOLIO Or
- MASTER'S THESIS (EDAP 699) (2-5)

Master of Education in Special Education

Major Code: SPE

Degree Code: MED

Unit: GE

Master of Education in Special Education (Advanced Practitioner)

Program Admission Procedure

- Baccalaureate degree from an accredited college.
- Admission to Graduate School and passing grade in EDSP 540: Introduction to Special Education or equivalent survey course.
- Completion of official program form with advisor.

Requirements for M.Ed. in Special Education (Advanced Practitioner)

- ELFH 600 Introduction to Research Methods and Statistics (3)
- ELFH 6XX (Historical, sociological, or philosophical foundations of education to be selected from ELFH 620, 625, 630, 640, 681) (3)

Introductory Courses

Select three courses from the following:

- EDSP 537 Language Learning for Exceptional Children (3)
- EDSP 594 Teaching Student with Physical Disabilities (3)
- EDSP 624 Seminar in Psychological & Social Implications of Handicaps (3)
- EDSP 634 Introduction to Mental Retardation (3)
- EDSP 640 Introduction to Learning Disabilities (3)
- EDSP 674 Theories of Behavior Disorders (3)
- EDSP 697 Applied Behavior Analysis (3)
- EDSP 670 Introduction to Autism (3)

Advanced Courses

Courses will be selected, with advisor's approval, to provide the necessary background to meet the candidate's professional goals

- Advanced courses (9)
- Related Electives (6)

See suggested list of courses

Exit Requirement

- EDSP 639 Research Analysis in Special Education (3)

Total 48 credits

Master of Education in Special Education with Concentration in Moderate/Severe Disabilities and/or P-12 Certification in Moderate/Severe Disabilities Rank II Equivalency

Program Admission Procedure

1. Candidates for this program must have a valid regular education teaching certificate (P-5, 5-9, 8-12)
2. Admission to Graduate School for Masters degree.
3. Admission to Graduate School in non-degree status for Rank II equivalency.
4. Successfully pass an introduction or survey class in Special Education.
5. Computer (at least 300MHZ with 64SDRAM, sound card and speakers, CD-ROM, at least 56.6 modem or higher capability) able to send and receive email and access to Internet, with printer.
6. *Instructor may require access to additional equipment for some courses.

Certification Program Leading to M.Ed. degree in Special Education or P-12 Certification in Moderate/Severe Disabilities

- EDSP 627 Applications of Assistive Technology (3)
 - EDSP 637 Transdisciplinary Collaboration for Inclusion (3)
 - EDSP 634 Characteristics and Needs of Students with Moderate and Severe Disabilities (3)
 - EDSP 646 Augmentative Communication (3)
 - EDSP 619 Orientation and Mobility for Teachers (3)
 - EDSP 670 Introduction to Autism (3)
 - EDSP 614 Transition Programs and services for youth with Disabilities (3)
 - EDSP 636 Diagnostic and Prescriptive Teaching of Individuals with Disabilities (3)
 - EDSP 638 Educational Management of Health, Physical, and Multiple Disabilities (3)
 - EDSP 635 Moderate and Severe Disabilities Practicum (3)
- NOTE: This class can be waived with 3 successful years of teaching in the Field of Moderate/Severe Disabilities and a STRONG letter of recommendation from your Principal. If this is done, then the replacement course would be EDSP 644: Applied Behavior Analysis (3)

For Masters:

- ELFH 600 Introduction to Graduate Studies in Education (3)
(Must be undertaken within 1 st nine hours)
- EDSP 639 Research in Special Education (3)

Master of Education in Special Education of P-12 Certification in Moderate/Severe Disabilities

Program Admission Procedure

- Certification in P-5, 5-9, or 8-12
- BA/BS degree from an accredited university/College of Education and Human Development
- Admission to Graduate School for Certification Program or Master of Education
- Introduction or Survey Course in Special Education
- Computer (at least 300MHZ with 64SDRAM, sound card and speakers, CD-ROM, at least 56.6 modem or higher capability) able to send and receive email and access to Internet, with printer. *Instructor may Require access to additional equipment for some courses.

Program Leading to Certification in Learning and Behavior Disorders Rank II and/or Master of Education in Learning and Behavior Disorders

- EDAP 610 Literacy: Research and Theory (3)
- EDAP 620 Mathematics Education in the Elementary School(3)

Special Education Entry Courses (To be completed as the first nine hours of EDSP course work)

- EDSP 540 Introduction to Exceptional Children (3)
- EDSP 640 Introduction to Learning Disorders (3)
- EDSP 675 Management of the Behavior Problem Child (3)

The following six courses may be taken in any sequence/combination upon completion of the "Special Education Entry Courses":

- EDSP 537 Language Learning for Exceptional Children (3)
- EDSP 594 Problems and Methods of Teaching the Physically Handicapped/Sensory Impaired (3) OR
- EDSP 638 Educational Management: Physical Disabilities (3)
- EDSP 618 Instructional Technology for Students with Special Needs (3)
- EDSP 681 Early Childhood Education of Exceptional Children (3)
- EDSP 614 Transition Services (3)

Special Education Exit Courses (completed sequentially as the last nine hours of the program)

- EDSP 642 Assessment Procedures for LBD (3)
- EDSP 643 Instructional Procedures for LBD (3)
- EDSP 645 Student Teaching: Learning and Behavioral Disorders (3) (if waived, a 3 hour course approval by advisor)

Total 39 credits

Master of Education in Special Education with a Concentration in Learning and Behavior Disorders and/or Certification in Learning and Behavior Disorders Rank II Equivalency

Program Admission Procedure

- Candidates for this program must have a valid regular education teaching certificate (P-5, 5-9, 8-12)
- Admission to Graduate School for Masters degree.
- Admission to Graduate School in non-degree status for Rank II equivalency.
- Teachers certified only in Music, Physical Education or Home Economics (at any level) or regular classroom teaching at the 5-8 or 7-12 level(s) must complete the EDAP 610 and EDAP 620 (pending review by the LBD Screening committee) with grades of C or better.
- Successfully passing an introduction or survey course in Special Education.

Program Leading to Certification in Learning and Behavior Disorders Rank II and/or Master of Education in Learning and Behavior Disorders

- EDAP 610 Literacy: Research and Theory (3)
- EDAP 620 Mathematics Education in the Elementary School (3)

Special Education Entry Courses (To be completed as the first nine hours of EDSP course work)

- EDSP 540 Introduction to Exceptional Children (3)
- EDSP 640 Introduction to Learning Disorders (3)
- EDSP 675 Management of the Behavior Problem Child (3)

The following six courses may be taken in any sequence/combination upon completion of the "Special Education Entry Courses":

- EDSP 537 Language Learning for Exceptional Children (3)
- EDSP 594 Problems and Methods of Teaching the Physically Handicapped/Sensory Impaired (3) OR
- EDSP 638 Educational Management: Physical Disabilities (3)
- EDSP 618 Instructional Technology for Students with Special Needs (3)
- EDSP 681 Early Childhood Education of Exceptional Children (3)
- EDSP 614 Transition Services (3)

Special Education Exit Courses (completed sequentially as the last nine hours of the program)

- EDSP 642 Assessment Procedures for LBD (3)
- EDSP 643 Instructional Procedures for LBD (3)
- EDSP 645 Student Teaching: Learning and Behavioral Disorders (3) (if waived, a 3 hour course approved by advisor)

Minimum Total: 33-39 hours

Master of Education in Special Education or P-12 Certification in Moderate/Severe Disabilities

Program Admission Procedure

- Certification in P-5, 5-9 or 8-12
- BA/BS degree from an accredited university/College of Education and Human Development
- Admission to Graduate School for Certification Program or Master of Education
- Introduction or Survey Course in Special Education
- Computer (at least 300MHZ with 64SDRAM, sound card and speakers, CD-ROM, at least 56.6 modem or higher capability) able to send and receive email and access to Internet, with printer. *Instructor may require access to additional equipment for some courses.

Certification Program Leading to M.Ed. degree in Special Education or P-12 Certification in Moderate/Severe Disabilities

- EDSP 627 Applications of Assistive Technology (3)
- EDSP 637 Transdisciplinary Collaboration for Inclusion (3)
- EDSP 634 Characteristics and Needs of Students with Moderate and Severe Disabilities (3)
- EDSP 646 Augmentative Communication (3)
- EDSP 619 Orientation and Mobility for Teachers (3)
- DSP 670 Introduction to Autism (3)
- EDSP 614 Transition Programs and services for youth with Disabilities (3)
- EDSP 636 Diagnostic and Prescriptive Teaching of Individuals with Disabilities (3)
- EDSP 638 Educational Management of Health, Physical, and Multiple Disabilities (3)
- EDSP 635 Moderate and Severe Disabilities Practicum (3)
- NOTE: This class can be waived with 3 successful years of teaching in the Field of Moderate/Severe Disabilities and a STRONG letter of recommendation from your Principal. If this is done, then the replacement course would be EDSP 644: Applied Behavior Analysis (3)

For Masters:

- ELFH 600 Introduction to Graduate Studies in Education (3) (Must be undertaken within 1 st nine hours)
- EDSP 639 Research in Special Education (3)

Total 36 credits

Master of Education in Special Education in Orientation and Mobility (leading to ACVREP Certification in the area of Orientation and Mobility)

Program Admission Procedure

- BA/BS degree from an accredited University
- Admission to Graduate School

- Successfully passing EDSP 540 or survey course in Special Education
- Successfully passing EDSP 619 Orientation and Mobility/ Daily Living Skills for Teachers
- Computer (at least 300 MHZ with 64 RAM, sound card and speakers, at least 56.6 modem or higher capacity) able to send/receive e-mail and access to Internet, with printer.

Orientation and Mobility

- EDSP 624 Characteristics and Needs of Students Who are Visually Impaired or Blind (3)
- EDSP 620 Introduction to Orientation and Mobility (3)
- EDSP 634 Characteristics and Needs of Students with Moderate and Severe Disabilities (3)
- EDSP 621 Advanced Methods in Orientation and Mobility I (3)
- EDSP 625 American Braille Codes (3)
- EDSP 622 Advanced Methods in Orientation and Mobility II (3)
- EDSP 623 Orientation and Mobility for Infants, Preschool, and Multiply Impaired (3)
- EDSP 630 Practicum: Observation and Participation in O&M (3)
- EDSP 631 Internship (3)

Master of Education in Special Education Resulting in Learning Behavior Disorders Certification (P-12), a Stand Alone and Alternative Certification Program in Special Education for Persons with no Teacher Certification

Program Admission Procedure

- Bachelor's degree from an accredited college or university
- Admission to Teacher Education
- Admission to Graduate School
- Employed as a teacher in a learning behavior disorders classroom

Stand Alone and Alternate Certification Program in Learning Behavioral Disorders

Required Courses for Certification

- EDSP 541 Introduction to Learning and Behavioral Disorders (3)
- EDSP 675 Management of the Behavior Problem Child in the Classroom (3)
- EDSP 537 Language Learning for Exceptional Children (3)
- EDSP 612 Curriculum Methods and Assessment I (3)
- EDSP 613 Curriculum Methods and Assessment: Field Component I (3)
- EDSP 618 Instructional Technology For Students With Special Needs (3)
- EDSP 693 Consulting with Parents and Teachers of Exceptional Children (3)
- EDSP 616 Curriculum Methods and Assessment II (3)

- EDSP 617 Curriculum Methods and Assessment: Field Component II (3)
- EDSP 614 Transition Programs Services for Children and Youth with Disabilities (3)
- EDSP 681 Early Childhood Education of Exceptional Children (3)
- EDSP 594 Problems and Methods of Teaching the Physically Handicapped and Sensory Impaired (3)
- EDAP 610 Literacy Research and Theory (3)
- EDAP 620 Introduction to Teaching Elementary Mathematics Education (3)

Additional Coursework For Master of Education Degree

- ELFH 600 Introduction to Research and Statistics (3)
- EDSP 639 Research in Special Education (3)

Total 48 credits

Master of Education in Special Education Resulting in Moderate and Severe Disabilities (P-12) Certification, a Stand Alone and Alternative Certification Program in Special Education for Persons with no Teacher Certification

Program Admission Procedure

- Bachelor's degree from an accredited college or university
- Admission to Teacher Education
- Admission to Graduate School
- Employed as a teacher in a moderate and severe disabilities classroom

Stand Alone and Alternative Certification Program in Moderate and Severe Disabilities

Required Courses for Certification

- EDSP 614 Transition Programs Services for Children and Youth with Disabilities (3)
- EDSP 627 Applications of Assistive Technology (3)
- EDSP 634 Characteristics and Needs of Students with Moderate and Severe Disabilities (3)
- EDSP 637 Transdisciplinary Collaboration for Inclusion (3)
- EDSP 636 Diagnostic/Prescriptive Teaching of Individuals with Moderate Mental Disabilities (3)
- EDSP 638 Educational Management of Physical and Multiple Disabilities (3)
- EDSP 537 Language Learning for Exceptional Children (3)
- EDSP 613 Curriculum Methods and Assessment: Field Component I (MSD) (3)
- EDSP 617 Curriculum Methods and Assessment: Field Component II (MSD) (3)
- EDSP 646 Augmentative Communication (3)
- EDSP 644 Applied Behavior Analysis (3)

Additional Requirements for Master of Education Degree

- ELFH 600 Introduction to Research and Statistics (3)
- EDSP 639 Research in Special Education (3)

Total: 39 hours

Master of Education in Special Education with Concentration in Visual Impairment and Blindness and/or P-12 Certification in Visual Impairment and Blindness Rank II Equivalency

Program Admission Procedure

- Candidates for this program must have a valid regular education teaching certificate (P-5, 5-9, 8-12)
- Admission to Graduate School for Masters degree.
- Admission to Graduate School in non-degree status for Rank II equivalency.
- Successfully pass an introduction or survey class in Special Education.
- Computer (at least 300MHZ with 64SDRAM, sound card and speakers, CD-ROM, at least 56.6 modem or higher capability) able to send and receive email and access to Internet, with printer.

*Instructor may Require access to additional equipment for some courses.

Certification Program in Blindness and Visual Impairment

- ELFH 600 Introduction to Graduate Studies in Education (3)
- EDSP 627 Applications of Assistive Technology (3)
- EDSP 637 Transdisciplinary Collaboration (3)
- EDSP 634 Characteristics and Needs of Students with Moderate and Severe Disabilities (3)
- EDSP 619 Orientation and Mobility/Daily Living Skills for Teachers(3)
- EDSP 624 Characteristics and Needs of Students Who are Blind and Visually Impaired (3)
- EDSP 625 American Braille Codes (3)¹
- EDSP 628 Assessment of Students Who are Visually Impaired and Blind (3)
- EDSP 626 Educational Procedures for Students Who are Visually Impaired and Blind (3)
- EDSP 629 Visual Impairment and Blindness Practicum(3)²
- EDSP 636 Diagnostic/Prescriptive Teaching and Individuals with Disabilities (3)
- EDSP 639 Research in Special Education (3)

¹This course includes Literary and Nemeth BANA approved Braille codes.

²Students MUST pass the Comprehensive Examination in Visual Impairment in order to receive a passing grade in this course and be recommended for certification in Blindness and Visual Impairment.

Total 30 - 36 credits

Master of Science in Exercise Physiology

Major Code: EXP

Degree Code: MS

Unit: GE

Department Webpage: <http://www.louisville.edu/edu/hpes/expphys/>

General Information

Students who complete the Master of Science degree in Exercise Physiology are prepared to pursue a number of career options. Graduates from our program have continued their education by completing the Ph.D. degree in fields such as exercise physiology, physiology, biochemistry, and the M.D. Many students have pursued careers in allied health fields such as nursing and physical therapy as well as in such fields as aviation physiology, cardiac rehabilitation, corporate wellness, and ergonomics. Because many of our students seek to work in the fields of cardiac rehabilitation and corporate wellness, the curriculum is structured to satisfy the preliminary requirements for certification as "exercise technologists" or "exercise specialist" as set by the American College of Sports Medicine. The curriculum provides the necessary knowledge base and course work to satisfy entrance into the certification process (which is under control of the American College of Sports Medicine and requires both a written and practical exam).

The M.S. thesis option requires a minimum of 33 hours of course work, which includes 6 credits devoted to completion of the thesis. Students in this option are required to actively participate in all phases of research within the laboratory. The thesis program require two full years of study including the summer between the first and second years. To complete the M.S. degree in exercise physiology, a minimum of 23 hours must be at the 600 level or above.

The M.S. non-thesis option emphasizes the use of exercise as a clinical intervention. This option is heavily slanted toward improved cardiovascular health and cardiovascular rehabilitation through the use of exercise. Students in this option must complete a minimum of 36 hours of course work. The non-thesis program require two full years of study including the summer between the first and second years.

Admission Procedure

In order to be admitted unconditionally a student must have earned a grade-points average of at least 2.75 on a 4-point scale in their undergraduate program. A variety of undergraduate majors are acceptable, including exercise science, biology, chemistry, physiology, nursing, etc. In addition, the student must complete the application procedure as required by the graduate school. Students are expected to score a minimum of 900 (Verbal and Quantitative sections combined) on the Graduate Record Exam. Students with a grade point standing below 2.75 can be admitted "on probation". This means if they do not

earn at least a “B” average in their first semester, they may be subject to dismissal. Only under unusual circumstances will students with less than a 2.5 grade-point average be admitted to the program. Individuals who do not meet the 900 requirement on the GRE may still be admitted. Admission in such cases will be based on prior course work (including GPA in science classes), experience, 2 letters of recommendation and personal interviews with the faculty.

Curriculum Requirements

Thesis Option

First Year:

Fall:

EXP 501 Applied Exercise Physiology (3)

- EXP 601 Lab Methods in Exercise Physiology (3)
- EXP 605 Human Physiology (3)

Spring:

- EXP 502 Principles of Exercise Testing & Prescription (3)
- EXP 600 Physiology of Exercise (3)
- EDFD 601 Applied Statistics (3) OR
- HSS 604 Research Methods (3)

Summer:

- EXP 604 Advanced Topics in Exercise Physiology (3)
- EXP 699 Thesis (1-6)

Second Year:

Fall:

- EXP 603 Seminar in Exercise Physiology (3)
- EXP 604 Advanced Topics in Exercise Physiology (3)
- EXP 699 Thesis (1-6)

Spring:

- EXP 604 Advanced Topics in Exercise Physiology (3)
- EXP 699 Thesis

MINIMUM TOTAL 33

Non-Thesis Option

First Year:

Fall:

- EXP 501 Applied Exercise Physiology (3)
- EXP 601 Lab Methods in Exercise Physiology (3)
- EXP 605 Human Physiology (3)

Spring:

- EXP 502 Principles of Exercise Testing & Prescription (3)
- EXP 600 Physiology of Exercise (3)

- EDFD 601 Applied Statistics (3) **OR**
- HSS 604 Research Methods (3)

Summer:

- EXP 604 Advanced Topics in Exercise Physiology (3)
- EXP 611 Principles of Electrocardiography (3)

Second Year:

Fall:

- EXP 603 Seminar in Exercise Physiology (3)
- EXP 604 Advanced Topics in Exercise Physiology (3)

Spring:

- EXP 604 Advanced Topics in Exercise Physiology (3) (OPTIONAL)
- EXP 620 Clinical Internship (6)

MINIMUM TOTAL 36

Master of Arts in Teaching in Physical Education

Major Code: HPE

Degree Code: MAT

Unit: GE

General Information

The Master of Arts in Teaching in Physical Education degree provides initial K-12 certification in health and physical education.

Program Admission

- All candidates must meet the general requirements for admission to the Graduate School, as well as the requirements for admission to certain specific programs offered by the College of Education and Human Development.
- All students applying for a master’s program in education must take the Graduate Records Examination (GRE) prior to application for admission. A combined score of 800 on the verbal and quantitative sections of the GRE is required for all master degree programs in the College of Education and Human Development.
- Students must take the PRAXIS II Subject Examinations in the area of Physical Education and Health. Please be advised that the PRAXIS II exams are offered only 6 times each year, and results usually take 6 weeks or more to reach the University of Louisville. Plan accordingly if your scores are to be received in time for application deadline. PRAXIS II Subject Examination tests, codes, and cut-off scores: Physical Education: content Area, Test 0091 – passing 147 and Health Education, Test 0550 – passing score is 630.

Exit Requirements

Minimum of 3.0 GPA, Portfolio, Student Teaching, Action Research Project or Thesis.

Curriculum

- HSS 605 Teaching and Learning for Elementary Physical Education (6)
- HSS 606 Teaching and Learning for Secondary Physical Education (6)
- HSS 609 Methods in Practical Living: Health (3)
- HSS 610 Experiential Outdoor Education (3)
- HSS 611 Seminar in Student Teaching in Health and Physical Education (3)
- HSS 612/613* Student teaching in Health and Physical Education (6-6)
- HSS 614* Action Research Project (3)

MINIMUM TOTAL 36

Master of Education in Health and Physical Education

Major Code: HPE

Degree Code: MED

Unit: GE

General Information

Graduates find work in schools, fitness centers, community health organizations and athletic/sports organizations.

Program Admission

All candidates must meet the general requirements for admission to the Graduate School, as well as the requirements for admission to certain specific programs offered by the College of Education and Human Development. All students applying for a master's program in education must take the Graduate Records Examination (GRE) prior to application for admission. A combined score of 800 on the verbal and quantitative sections of the GRE is required for all master degree programs in the College of Education and Human Development. Exit Requirements: Minimum of 3.0 GPA, and two of the following: portfolio, internship, exit exam, research project or thesis.

COURSE PREFIX	COURSE NUMBER	COURSE TITLE	CREDIT HOURS
ELFH	600	Introduction to Research Methods and Statistics	3

HSS	602	Instructional Technology Health and Physical Education	3
HSS	604	Research Methods in HPES	3
HSS	655	Current Trends and Issues in HPES	3
Choose one of the following. (3 hours)			
HSS	608	Curriculum: An Achievement Based Approach	3
HSS	684	Program Planning in Health Education and Promotion	3
Choose one leadership course (3 hours)			
HSS	610	Experiential Outdoor Education Leadership	3
HSS	625	Instructional Leadership in Physical Education	3
HSS	631	Leadership in Health Promotion	3
Electives (15 hours): Course approved by advisor.			

Certificate in Health Professions Education

Contact Information

Dr. Joseph Petrosko

General program information

To promote effective clinical teaching and student instruction in a variety of Health Science Center settings and to develop skill in designing education research for presentation and publication.

Program Admission Procedure

This is a Graduate School non-degree program. Requires a minimum GPA of 2.75.

Curriculum

ELFH 683 College Teaching 3

ELFH 600 Graduate Research and Statistics 3

ELFH 661 Adult Learning and Development 3

ELFH 614 Assessment and Evaluation 3

Minimum total hours 12

Master of Science in Sport Administration

Major Code: SPAD

Degree Code: MS

Unit: GE

General Information

The mission of SPAD Program is the development and preparation of individuals to be future leaders and administrators in the sport industry. The SPAD program provides learners with skills and knowledge about sport management theory and practices so they can successfully guide positive change in individuals and organizations which they encounter throughout their careers and lives.

The Master of Science in Sport Administration is approved (accredited) by the Sport Management Program Review Council (SMPRC) The SMPRC was created by the National Association for Sport and Physical Education (NASPE), and the North American Society for Sport Management (NASSM) (to act as an entity that reviews sport management programs. The SPAD program has a diverse student population representing a variety of geographical, cultural, educational, and professional backgrounds. U of L SPAD graduates find jobs in professional sports, business and marketing, exercise science, physical education, collegiate and high school coaching, collegiate and high school athletic administration, recreation, health and fitness, and other areas in the sport industry.

Admission Procedure

The recommendation to admit an applicant is made by an Admissions Committee made up of faculty in the Sport Administration Program. A preliminary decision is based on the following: U of L Graduate Application, all undergraduate and graduate transcripts, goals statement, GRE test scores, and at least two recommendations for Graduate School (Note: Applicants may submit up to three recommendations). Applicants are strongly encouraged to have at least one recommendation from a University faculty member who is familiar with the applicant's work as a student. A formal Statement of Goals should explain in 500 words or less why they want to be admitted into the program and what they plan to do with a Sport Administration degree. A minimum combined GRE test score of 800 (verbal and quantitative section) and undergraduate GPA of 2.75 is desired. Applicants will be considered for admission during a given review cycle only if all of the above materials have been received by the due date. Incomplete applications will not be considered. The due dates for each review cycle are as follows: February 1 (for Summer or Fall Admission), April 1 (for Summer or Fall Admission), July 1

(for Fall Admission), and November 1 (for Spring Admission). After the initial review of admission materials the committee members can either choose to reject the candidate without an interview or decide to proceed with an interview. Following the interview phase, the Admissions Committee makes its final recommendation to accept the candidate for admission or to deny admission.

Curriculum Requirements

CORE (27 HOURS)

- EDFD 600 Introduction to Research Methods and Statistics (3)
- HSS 604 Research Methods in HPES (3)
- SPAD 505 Sport Facility Management (3)
- SPAD 604 Financial Principles in Sport (3)
- SPAD 625 Sport Administration (3)
- SPAD 683 Sport Marketing (3)
- SPAD 684 Current Trends and Issues in Sport Administration (3)
- SPAD 689 Legal Aspects in the Sport Industry (3)
- SPAD 692 Internship in Sport Administration (3)

ELECTIVES(9 HOURS)

- HSS 649 Psychological Aspects of Sport and PE (3)
- SPAD 525 Sport Event Management (3)
- SPAD 529 American Women in Sport (3)
- SPAD 530 Sport Promotion and Publicity (3)
- SPAD 661 Sport in American Society (3)
- SPAD 661 Special Topics in Sport Administration (3)
- SPAD 680 Athletics in Higher Education (3)
- Business School Classes
- School of Education Classes
- Other Classes Approved by an Advisor

MINIMUM TOTAL HOURS 36

Education Certification Programs

1. Elementary Education - RANK I
2. Instructional Leadership
3. Middle School Education - RANK I
4. Secondary Education - RANK I
5. Special Education - RANK I

RANK I Program in Elementary Education (Professional Program)

Program Admission Procedure

- Holds Certification in P-5 or has an M.Ed. or Rank II Equivalence.

- Admission to Graduate School and
- Completion of Program with advisor are required

Rank I in Elementary Education Professional Program

- EDAP 606 Orientation and Readings (take in first semester of enrollment) (3)
- ELFH 600 Introduction to Research Methods & Statistics (3)*

Leadership and change: (select one of the following courses)

- EDAP 607 Leadership and Change,
- ELFH 603 Administrative Leadership in a Reform Environment,
- EDAP 624 Curriculum Theory,
- EDAP 625 Social and Ethical Development of Teaching (3)

Success for All Learners: (select one of the following courses)

- EDAP 642 Literacy Learning & Cultural Differences,
- EDAP 626 Affirming Diversity,
- EDTP 503 Developing Cross-Cultural Competence (3)

AREA OF EMPHASIS (AT LEAST 12 CREDITS)

- EDAP 680 Capstone Course (3)

Elective (3)

Exit Requirements

- PORTFOLIO Or
- MASTER'S THESIS (EDAP 699) (2-5)

Total 30 Credits

RANK I Program in Elementary Education (Advanced Practitioner)

- Holds Certification in P-5 and has an M.Ed. or Rank II Equivalence.
- Admission to Graduate School and
- Completion of Program with advisor are required

Advanced Practitioner RANK I Program Elementary Education

Leading Change (Select one of the following) (3)

- EDAP 606 Orientation and Readings (take in first semester of enrollment) (3)
- ELFH 600 Introduction to Research Methods & Statistics (3)
- EDAP 607 Leadership and Change,
- ELFH 603 Administrative Leadership in a Reform Environment,
- EDAP 624 Curriculum Theory,
- EDAP 625 Social and Ethical Development of Teaching

The Multicultural Learner: (select one of the courses from the

following) (3)

- EDAP 642 Literacy Learning & Cultural Differences,
- EDAP 626 Affirming Diversity,
- EDTP 503 Developing Cross-Cultural Competence;
- Soc 630 Sociology of Education;
- WMST 532 History of American Sexualities;
- WMST 556 Feminist Theory;
- PAS 529 Teacher Institute on African-American Issues

AREA OF EMPHASIS (AT LEAST 12 CREDITS)

EDAP 680 Capstone Course (3)

Electives(9)

Exit Requirements

- PORTFOLIO OR
- NATIONAL BOARD CERTIFICATION

Professional Certificate for Instructional Leadership Supervisor of Instruction (Post-Master's/Rank I)

Program Admission

- Admission to Graduate School (recommendation made by department committee after all materials are submitted)
- Master's degree with a grade point average of 3.0 on a 4.0 point system
- General Record Exam scores of at least 800 (verbal + quantitative)
- Qualification for a Kentucky classroom teaching certificate (except speech and communication disorders)

Professional Certificate for Instructional Leadership School Principal (all Grades - Post-Master's/Rank I)

Program Admission

- Admission to Graduate School (recommendation made by department committee after all materials are submitted)
- Master's degree with a grade point average of 2.75 on a 4.0 point system
- General Record Exam scores of at least 800 (verbal + quantitative)
- Qualification for a Kentucky classroom teaching certificate
- Successful completion of the Kentucky Teacher Internship Program or two years of successful K-12 teaching experience outside the Commonwealth of Kentucky

Professional Certificate for Instructional Leadership - Superintendent

Program Admission

- Admission to Graduate School (recommendation made by department committee after all materials are submitted)
- Master's degree with a grade point average of 3.0 on a 4.0 point system
- General Record Exam scores of at least 800 (verbal + quantitative)
- Qualification for a Kentucky classroom teaching certificate
- At least three (3) years of full-time teaching experience
- Completion of both Level I and Level II preparation and certification for principal or supervisor of instruction

Curriculum

- ELFH 639 The School Superintendency (3 credits)
- ELFH 649 School System Administration (3 credits)
- ELFH 659 Planning (formerly ELFH 626) (3 credits)
- ELFH 679 The Superintendency Practicum (3 credits)

Rank I Program in Middle Grades Education (Professional Program)

Program Admission Procedure

- Holds Certification in a 5-9 area or has an M.Ed. or Rank II Equivalence.
- Admission to Graduate School and
- Completion of Program with advisor are required

Rank I in Middle Grades Education Professional Program

- EDAP 606 Orientation and Readings (take in first semester of enrollment) (3)
- ELFH 600 Introduction to Research Methods & Statistics (3)*

Leadership and change: (select one of the following courses)

- EDAP 607 Leadership and Change,
- ELFH 603 Administrative Leadership in a Reform Environment,
- EDAP 624 Curriculum Theory,
- EDAP 625 Social and Ethical Development of Teaching (3)

Success for All Learners: (select one of the following courses)

- EDAP 642 Literacy Learning & Cultural Differences,

- EDAP 626 Affirming Diversity,
- EDTP 503 Developing Cross-Cultural Competence (3)

AREA OF EMPHASIS (AT LEAST 12 CREDITS)

EDAP 680 Capstone Course (3)

Elective (3)

Exit Requirements

- PORTFOLIO Or
- MASTER'S THESIS (EDAP 699) (2-5)

Total 30 Credits

Rank I Program in Middle Grades Education (Advanced Practitioner)

Program Admission Procedure

- Holds Certification in a 5-9 area and has an M.Ed. or Rank II Equivalence.
- Admission to Graduate School and
- Completion of Program with advisor are required

ADVANCED PRACTITIONER RANK 1 PROGRAM MIDDLE GRADES EDUCATION

Leading Change (Select one of the following) (3)

- EDAP 606 Orientation and Readings (take in first semester of enrollment) (3) OR
- ELFH 600 Introduction to Research Methods & Statistics (3) OR
- From Leadership and change category: (3)
- EDAP 607 Leadership and Change,
- ELFH 603 Administrative Leadership in a Reform Environment,
- EDAP 624 Curriculum Theory,
- EDAP 625 Social and Ethical Development of Teaching

The Multicultural Learner: (select one of the courses from the following) (3)

- EDAP 642 Literacy Learning & Cultural Differences,
- EDAP 626 Affirming Diversity,
- EDTP 503 Developing Cross-Cultural Competence;
- Soc 630 Sociology of Education;
- WMST 532 History of American Sexualities;
- WMST 556 Feminist Theory;
- PAS 529 Teacher Institute on African-American Issues (3)

AREA OF EMPHASIS (AT LEAST 12 CREDITS)

EDAP 680 Capstone Course (3)

Electives(9)

Exit Requirements

- PORTFOLIO OR
- NATIONAL BOARD CERTIFICATION

Minimum Total: 30 hours

Rank I Program in Secondary Education (Professional Program)

Program Admission Procedure

- Holds Certification in an 8-12 area and has an M.A.T. or Rank II Equivalence.
- Admission to Graduate School and
- Completion of Program with advisor are required

Rank I in Secondary Education Professional Program

- EDAP 606 Orientation and Readings (take in first semester of enrollment) (3)
- ELFH 600 Introduction to Research Methods & Statistics (3)*

Leadership and change: (select one of the following courses)

- EDAP 607 Leadership and Change,
- ELFH 603 Administrative Leadership in a Reform Environment,
- EDAP 624 Curriculum Theory,
- EDAP 625 Social and Ethical Development of Teaching (3)

Success for All Learners: (select one of the following courses)

- EDAP 642 Literacy Learning & Cultural Differences,
- EDTL 626 Affirming Diversity,
- EDTP 503 Developing Cross-Cultural Competence (3)

AREA OF EMPHASIS (AT LEAST 12 CREDITS)

EDAP 680 Capstone Course (3)

Elective (3)

Exit Requirements

- PORTFOLIO Or
- MASTER'S THESIS (EDAP 699) (2-5)

Total 30 credits

Rank I Program in Secondary Education (Advanced practitioner)

Program Admission Procedure

- Holds Certification in a 8-12 area and has an M.Ed. or Rank II Equivalence.
- Admission to Graduate School and
- Completion of Program with advisor are required

ADVANCED PRACTITIONER RANK 1 PROGRAM SECONDARY EDUCATION

Leading Change (Select one of the following) (3)

- EDAP 606 Orientation and Readings (take in first semester of enrollment) (3) OR
- ELFH 600 Introduction to Research Methods & Statistics (3) OR

From Leadership and Change category: (3)

- EDAP 607 Leadership and Change,
- ELFH 603 Administrative Leadership in a Reform Environment,
- EDAP 624 Curriculum Theory,
- EDAP 625 Social and Ethical Development of Teaching

The Multicultural Learner: (select one of the courses from the following) (3)

- EDAP 642 Literacy Learning & Cultural Differences,
- EDAP 626 Affirming Diversity,
- EDTP 503 Developing Cross-Cultural Competence;
- Soc 630 Sociology of Education; WMST 532 History of American Sexualities:
- WMST 556 Feminist Theory;
- PAS 529 Teacher Institute on African-American Issues (3)

AREA OF EMPHASIS (AT LEAST 12 CREDITS)

EDAP 680 Capstone Course (3)

Electives(9)

Exit Requirements

- PORTFOLIO OR
- NATIONAL BOARD CERTIFICATION

Minimum Total: 30 hours

Rank I Program in Special Education

Program Admission Procedure

Admission to Graduate School in Non-Degree status. Holds Certification and a master's degree or its equivalent based upon one of the following:

1. A master's degree leading to a standard teaching certificate.
2. A master's degree in a professional education specialty.
3. A master's degree in an academic subject identified in the teacher certification requirements (religion and law are not appropriate);
4. A 32-semester hour non-degree fifth year program; and

A 32-semester hour non-degree fifth year program, which may include 12 semester hours of credit, earned as continuing education units and/or professional staff development units.

Qualifications for Rank I :

1. The candidate for Rank I shall hold a regular teaching certificate and a master's degree or its equivalent based on one of the following:
 - a. A master's degree leading to a standard teaching certificate;
 - b. A master's degree in a professional education specialty;
 - c. A master's degree in an academic subject identified in the teacher certification requirements (religion and law are not appropriate);
 - d. A 32-semester hour non-degree fifth year program; and
 - e. A 32-semester hour non-degree fifth year program, which may include 12 semester hours of credit, earned as continuing education units and/or professional staff development units.
2. The Rank I classification shall require the completion of either:
 - a. 30 semester hours approved graduate level or equivalent (approved teacher institute) credit in addition to the requirements for a Rank II classification, or
 - b. 60 semester hours approved graduate level credit including a master's degree.
3. The candidate shall plan his Rank I program in consultation with an advisor in the School of Education in advance of completing the first coursework or very early in the program. The program shall be appropriate to the candidate's present or projected role in professional education. A copy of this program shall be filed in the Education Advising Center.
4. Of the total Rank I program, at least 15 semester hours beyond Rank II shall be taken at the University of Louisville. The remaining credit hours may be taken at the same institution or, upon approval of the faculty advisor, at other institutions. There is no stipulation as to recency of completion of Rank I credit.
5. All coursework for Rank I shall carry graduate credit or equivalent (approved teacher institute) credit, and no less than half shall be earned in courses open only to graduate students.
6. An academic average of "B" shall be required on the course hours submitted for Rank I, and no credit shall be accepted for course carrying a grade lower than "C".
7. A portfolio is required for successful completion of this program.

Fifth Year (Rank II Equivalency) Program - Special Education

Program Admission Procedure

- Admission to Graduate School in Non-Degree status.
- Kentucky teacher certification.
- Successful completion of an introductory or survey course in Special Education.

Special Education RANK II Requirements

Basic Professional Courses

- ELFH One course in philosophical, historical, or sociological foundations to be selected from ELFH 620, 625, 630, 640, 681 (3)

Area of Specialization (12)

- In consultation with your graduate advisor, designate a minimum of 12 semester hours of graduate courses which will provide further depth and breadth of preparation in an area of your choice.

ELECTIVES (18)

- Select 18 hours of courses. For students who have not had previous courses in cultural diversity, electives in this area are strongly recommended.

NOTE: Up to 12 hours of Professional Education units may be counted toward this program.

College of Education and Human Development Faculty

Professors

William Bush, Mathematics Education
 Jean Ann Clyde, Elementary Literacy
 Mark Condon, Literacy
 George K. Cunningham, Educational Psychology
 Nancy J. Cunningham, *Program Coordinator*, Mental Health Counseling
 John M. Dillard, School Counseling
 Allan Dittmer, Environmental Science
 Thaddeus Dumas, School Reform
 Richard A. Fee, Health Promotion
 Robert D. Felner, *Dean*, Counseling Psychology
 Mary A. Hums, Sport Administration
 Karen Karp, *Chair*, Mathematics Education
 John Keedy, School Administration
 Cheryl A. Kolander, *Associate Dean for Academic Affairs*, Health Promotion
 Diane Kyle, Curriculum
 Ellen McIntyre, Literacy
 Tori Molfese, *Center Director*, Early Childhood Education
 Early Childhood Research

Joseph M. Petrosko, *Acting Chair*, Evaluation and Statistics
 Pedro R. Portes, *Interim Chair*, Distinguished Professor of
 Research Educational Psychology
 Robert Ronau, *Associate Dean Research*, Mathematics Education
 Daya Sandhu, *Coordinator*, School Counseling
 Gina Schack, *Assistant Chair*, Gifted Education
 Gerald B. Sklare, School Counseling
 Bernard J. Strennecky, *Director*, International Services Literacy
 Samuel C. Stringfield, Educational Research and School
 Reform
 Ann M. Swank, Exercise Physiology
 Charles S. Thompson, *Program Director* – Elementary Educa-
 tion, Mathematics Education
 Randy Wells, *Program Director*, Middle & Secondary Education,
 Business Education
 John F. Welsh, *Coordinator*, Higher Education

Associate Professors

Debra Bauder, Special Education
 Nettye Brazil, Special Education - LBD
 Ann Larson, *Program Director*, Doctoral Programs, English
 Education/Literacy
 Vivian Moody, Mathematics Education
 Sheri Moore, Special Education
 Tom Simmons, *Program Director* - Special Education Special
 Education
 J. Lea Smith, Literacy
 Mike A. Boyle, *Coordinator* Human Resource Education
 Namok Choi, Evaluation and Statistics
 Michael Cuyjet, *Acting Associate Provost for Student Life*,
 College Student Personnel
 T. Christopher Greenwell, Sport Marketing
 Patrick H. Hardesty, *Director*, Counseling Psychology
 Kathleen M. Kirby, Counseling Psychology
 Daniel F. Mahony, Jr., *Assistant University Provost*, Sport
 Finance
 Stephen K. Miller, Foundations of Education
 Anita M. Moorman, *Vice-Chair*, Sport Law
 Carolyn Rude-Parkins, *Coordinator*, Instructional Technology
 Carol T. Stinson, *Program Director*, Health Promotion
 William T. Weinberg, *Chair*, Physical Education
 Paul A. Winter, *Coordinator*, Doctor of Philosophy

Assistant Professors

E. Todd Brown, Mathematics Education
 Sherri Brown, Science Education
 Andy Kemp, Science Education
 Maggie McGatha, Mathematics Education
 William Penrod, Special Education – V.I.
 Elizabeth Rightmyer, Early Childhood Education
 Thomas Tretter, Science Education

Adjunct Faculty

*Scott Been, Art Therapy
 Claudia Beeny, College Student Personnel
 *Bill Braden, School Counseling

*Harrie Lynn Buecher, Educational Psychology
 John Carns, *Associate Athletic Director for Compliance*,
U of L Athletics, Legal Aspect of Sport/Compliance
 *Sandra Duncan, School Counseling
 *Elizabeth Fitzgerald, Mental Health Counseling
 *Denise Gifford, College Student Personnel
 Jeffery Jackson, Counseling Psychology
 *Sharon LaRue, Art Therapy
 *Marybeth Orton, Art Therapy
 Ian Patrick, *Director Alumni Affairs*, *Bellarmino University*,
 Athletics in Higher Ed/Alumni Development
 *Charles Pemberton, School Counseling
 Margaret W. Pentacost, Physical Education
 *Bridgette Pregliasco, College Student Personnel
 Dale Ramsey, *Vice-President for Student Affairs/Director of*
Intramural Sports, Campus Recreation
 *Thomas Reio, Jr., Educational Psychology
 *Fred Rhodes, College Student Personnel
 K.C. Scull, *Stadium Manager*, *Papa John's Cardinal Stadium*,
 Facility Management
 *Linda Shapiro, *Associate Provost*, College Student Personnel
 Holly Sheilley, *Assistant Director of Compliance*, *U of L Ath-*
letics, Compliance/Ethics
 *James Thompson, Counseling Psychology
 Jonetta Weber, Sport Sociology
 Evelyn Woods, College Student Personnel

Term Faculty

Dan Ash, Human Resources
 Marty Bell, School Communications
 Donna Blackburn, Higher Education/WKU
 Terry Brooks, School Administration
 Stephen Daeschner, School Administration
 Nancy Dalrymple, Special Education
 Melissa Evans-Andris, Sociology
 Jeanne Fiene, Higher Education/WKU
 Ralph Fitzpatrick, Multicultural Education
 Blake Haselton, Educational Finance
 Rick Keaster, Higher Education/WKU
 Albert Lyons, Educational Research
 Carolyn O'Daniel, Higher Education
 Mary O'Phelan, Higher Education/WKU
 Pamela Raymer, Human Resource Education
 Robert Rodosky, Educational Evaluation
 Sharon Spall, Higher Education/WKU
 Madelon F. Zady, Human Development
 Karen Grove, Technology Education
 Jean Hicks, *Center Director* – Literacy
 Louisville Writing Project
 Marcia Lile, Social Studies Education
 Pat Marshall, *Field Placement Coordinator* Generalist
 Yvonne Niemann, Special Education Moderate/Severe
 Holly Nolan, *Director* – Alternative Certification
 Judy Phillips, Literacy
 Sheila Poore, Reading Education
 Mary Anne Reynolds, Special Education – Visual Impairment
 M. Shelley Thomas, Social Studies Education

Instructor

Scott Crawford, Current Trends in Sport Industry
 Steve Dittmore, Governance/Current Trends in the Sport Industry

Emeritus/Emerita

Rea T. Alsop, School Counseling
 William H. Banks, Jr.
 Keith Bayne, Training & Development
 Ed Berla
 Edward H. Berman, Foundations
 Sharleen J. Birkimer, Health Promotion
 James Blake
 Jewell B. Brownstein
 Hilda R. Caton
 Richard K. Crosby, Training & Development
 Denzil Edge
 Everett Egginton, International Studies
 John E. Garrett
 Robert E. Hoye, Administration and Higher Ed
 Marjorie M. Kaiser
 William F. Kelly, Mental Health Counseling
 Karen K. Lind
 Eleanor Y. Love, College Student Personnel
 Jack Morgan
 Anne O. Netick
 V. Daniel Ochs
 John H. Pollock
 F. Randall Powers
 Keith Raitz, Philosophy
 P. Joanne Rowe, Physical Education
 Gordon C. Ruscoe, Foundations
 Samuel E. Peavey
 Robert R. Schulz, Administration and Higher Ed
 John L. Strobe, Jr., Administration and Higher Ed
 Francis C. Thiemann, Administration and Higher Ed
 Patricia A. Walker

The Graduate School

Ronald M. Atlas, Ph.D., Dean

The Graduate School offers the following masters programs:

Interdisciplinary Studies- M.A.

Interdisciplinary Studies- M.S.

Certificate in Data Mining

Certificate in Logistics and Distribution

Certificate in Latin American Studies

Interdisciplinary Studies

Major Code: IS

Degree Code: MA/MS

Unit: GI

Department Webpage: http://graduate.louisville.edu/prog_pubs/programs/ahm/interdisc.html

Program Information

Master of Arts and Master of Science degree programs in interdisciplinary studies are available to qualified students who wish to structure graduate programs crossing traditional disciplinary lines. These programs are administered through the Office of Student Services of the Graduate School, since admission procedures for these programs are necessarily more complex than those for more traditional graduate programs.

Students wishing to enroll in these programs should contact the Dean of the Graduate School, for information about application and development of a program and for details about the general regulations relating to master's degrees and their application to these programs.

Application and Admission

Applicants for individualized interdisciplinary master's programs must present complete admission credentials in order to be formally admitted by one of their constituent departments. Such formal admission must be recommended by at least one department or program offering degrees through the Graduate School before the student may register for course work. The required credentials are:

1. The application for admission, specifying which departments the student expects to comprise the program;
2. Transcripts showing all undergraduate and graduate course work and all degrees earned;
3. Scores on the Graduate Record Examination General Test;
4. Three letters of recommendation;
5. TOEFL score if the applicant's native language is not English and he/she has not earned a degree from a university or college in the U.S.;
6. A written statement of career objectives and rationale for the interdisciplinary research objective.

All these credentials must be sent to the Office of Graduate Admissions, University of Louisville, for distribution to the appropriate offices.

Only upon receipt of a letter of admission from the Office of the Graduate School may the applicant enroll for course work. There is no guarantee, however, that the desired degree program will be approved. Admission will be conditional until

the program proposal has been submitted and approved by the Office of the Graduate School. During the initial semester, the curricular requirements of the program must be worked out with a supervisory committee of at least three faculty members. The Chair, as well as the majority of the Committee, must be members of the Graduate Faculty.

All departments or programs in which the student proposes to take more than 3 hours of graduate course work must offer degrees through the Graduate School; and, before submitting a program proposal, the student must have the permission of the department or program to take those courses.

Program Proposal

In addition to the above stipulations regarding constituent departments or programs, each interdisciplinary degree program must meet specific criteria as follows:

1. An overall minimum of 30 semester hours at 500 or 600 level.
2. A thesis (maximum of 6 hours for thesis in a 30-hour program) or six (6) additional hours of 600- level courses for non-thesis. Interdisciplinary students must enroll in GS 699 for thesis credit.
3. At least one-half of the non-thesis, non-practicum, non-internship credit hours must be at the 600 level.
4. A minimum of 6 hours of 600-level course work must be taken in each of at least two departments or programs offering degrees through the Graduate School.
5. No single department or program may offer more than half the total number of credit hours required by the program.
6. Exclusive of thesis credit, no more than 6 hours may be taken in courses of the independent-study or practicum type; such course work may not be counted toward criteria specified in 3 or 4.
7. Courses designated as fulfilling degree requirements must be offered with sufficient frequency to permit the student to complete degree requirements within a reasonable time (two years for a 30-hour program).
8. The proposed curriculum must be submitted on the appropriate form, with approval signatures of at least three graduate faculty members.
9. Requests for approval of substitutions or alternate courses must be submitted in writing to the Director of Interdisciplinary Studies in the Office of the Graduate School.

Upon receipt by the Graduate School, the program proposal will be reviewed and will be approved, provided that it meets the criteria stated above. The student will be notified of its approval by receiving a signed copy.

Only after the proposal has been approved and all necessary permissions from academic units have been received, will the student be fully admitted to the program in interdisciplinary studies. Admission is conditional until that time.

Requests for further information or assistance should be addressed to:

Ms. Jenny Madden
 Graduate School
 Houchens Building, Suite 105
 University of Louisville
 Louisville, Kentucky 40292
 Phone: (502) 852-6495
 Email: graduate@louisville.edu

Certificate in Data Mining

Program Objectives

To address the need for trained professionals in the interdisciplinary field of data mining, the Department of Computer Engineering and Computer Science (CECS) and the Department of Mathematics faculty have developed a joint certificate program in data mining. The certificate will consist of 18 hours, with two required courses from CECS, two required courses from Mathematics, and two elective courses selected from a list of relevant elective courses in CECS and Mathematics.

Required courses and activities

Two required Computer Engineering courses :

- CECS 535 Introduction
- CECS 632, Data Mining

Two required Mathematics courses:

- Math 665 Advanced Linear Statistical Models
- Math 667 Methods of Classification

Two elective courses chosen from the following list of courses:

- CECS 545 Artificial Intelligence
- CECS 563 Experimental Design in Engineering
- CECS 619 Design and Analysis of Computer Algorithms
- CECS 630 Advanced Databases and Data Warehousing
- CECS 645 Advanced Artificial Intelligence
- MATH 560 Introduction to Statistical Data Analysis
- MATH 561 Probability Theory
- MATH 562 Mathematical Statistics
- MATH 566 Nonparametric Statistics
- MATH 567 Sampling Theory
- MATH 568 Time Series Analysis

Certificate in Logistics and Distribution

The Graduate Certificate Program in Logistics and Distribution is offered jointly by the College of Arts and Sciences, the Col-

lege of Business, and The J. B. Speed School of Engineering. It provides qualified applicants a high quality program for structured graduate study in this truly interdisciplinary field. The program is designed primarily for people who are currently working in the logistics and distribution organizations in the Louisville area, or for those who aspire to gain general knowledge in the field that may lead to career opportunities in logistics and distribution. As a result, the outcomes of the program are to provide, (1) a highly skilled workforce for regional employers; (2) a sought-after academic credential for employee-students; and (3) a career advancement credential for both employers and employees in the logistics and distribution sector.

Program Faculty

The faculty who teach in the certificate program will be drawn from the members of the Logistics and Distribution Institute (LoDI) faculty. A list of these faculty members, with links to their vitae, may be found on the web at: <http://www.louisville.edu/org/lodi/faculty.html>.

Curriculum

The curriculum of the Certificate in Logistics and Distribution requires the completion of a total of 18 semester hours of coursework, consisting of six 3-semester hour courses. These courses are:

- MKT 525 Distribution Management (3 hours)
- MATH 588 Discrete Mathematics for Logistics and Distribution Applications (3 hours)
- ACCT 526 Finance and Accounting Applications in Logistics and Distribution (3 hours)
- IE 621 Facilities Planning (3 hours)
- IE 651 Warehousing and Transportation (3 hours)
- MKT 527 Logistics Management (3 hours)

Admission Requirements

Students who apply for admission to the certificate in logistics and distribution program are expected to meet the following typical U of L Graduate School standards:

- Submission of a University of Louisville Graduate School Application,
- At least two letters of recommendation,
- The possession of at least a baccalaureate degree,
- The submission of an official transcript for each prior degree earned,
- A minimum 2.75/4.0 undergraduate cumulative grade point average, and

Submission of scores on the Graduate Record Examination (GRE) or the Graduate Management Admissions Test (GMAT)

Certificate in Latin American Studies

General Information

The Graduate Certificate in Latin American Studies is an interdisciplinary program, involving multiple departments within the College of Arts and Sciences, which provides a specialized concentration focusing on Latin America. This program, housed within the Graduate School, offers students a wide range of course options that examine Latin American societies from the perspective of their history, social structure, economic and political structures, literature, art, and culture. The fifteen-hour program may be completed as a “stand alone” program, or in conjunction with other graduate programs.

Admissions Requirements and Process

Applicants need to have completed an undergraduate baccalaureate degree granted by a United States institution of higher education or its equivalent in another country. To be accepted into the LAS Graduate Certificate Program, students must meet the standard criteria for general admission to the University of Louisville Graduate School, and supply all standard documentation required for admission. Students wishing to pursue the graduate certificate in conjunction with a graduate degree program in another UofL department should first apply and be admitted to the degree program before applying for admission to the LAS graduate certificate program. The Director of the Latin American Studies Program will interview each student as part of the application process and an Admissions Committee will review applications and decide if a student may be recommended to the LAS Graduate Certificate Program.

Curriculum Requirements

1. The minimum requirement for completion of the LAS graduate certificate is 15 credit hours.
2. Three of the five required courses must be taken at the 600 level.
3. Of the 15 required credit hours, students must take courses with a substantial Latin American content from at least three different disciplines. These may include the following disciplines, but could include others if a course is offered with a substantial Latin American content: Anthropology, Art History, History, Humanities, Linguistics, Modern Languages, Pan-African Studies, Political Science, Portuguese, and Spanish, and Women’s and Gender Studies.
4. Of the 15 required credit hours, students must take at least one course from the following list: LAS 680 Issues in Latin America, Spanish 670: Special Topics (seminar with a Latin American topic), Political Science 647: Seminar on Latin America, or History 503/PAS 510: Race Class, and Identity in Latin America.

5. Students must meet a minimum language requirement of three hours of Spanish or Portuguese at the 200 level or above, or demonstrate equivalent language proficiency.
6. A single course may satisfy more than one requirement.
7. Substitutions may be made at the discretion of the Director of Latin American Studies.
8. Course work toward the graduate certificate in LAS may also count toward the student's graduate degree.
9. Students may not apply 500-level courses taken for undergraduate credit.

Courses that Fulfill the LAS Graduate Certificate

Additional courses with substantial Latin American content, which are not listed below, may also be taken to fulfill the requirements for the LAS Graduate Certificate.

- ARTH 542: Special Topics - Mexican Art and Architecture
- ARTH 544: Pan-African Art: Form and Content
- HIST 503: Race Class, and Identity in Latin America
- HIST 533: Revolution and Reform in Twentieth-Century Latin America
- HIST 535/611: The History of Mexico
- HUM 562: Studies in Hispanic Culture
- LAS 680: Issues in Latin American Studies
- LAS 681: Latin American Studies Graduate Internship
- LING 690: Seminar in Linguistics: Theories of Culture/HUM 682/ ENG 682
- LING 690: Seminar in Linguistics: Cultural Metaphors/HUM 682/ ENG 682
- ML 551: Special Topics
- PAS 505: The Black Atlantic
- LAS 510: Race Class, and Identity in Latin America
- PAS 532: Slave Trade and Slavery in the African World
- PAS 533: The History and Popular Culture of the African Diaspora
- AS 542/643: Black Women's Voices
- PAS 581: Pan-African Art: Form and Content
- POLS 554: Democratization and Regime Change
- POLS 563: Women in Developing Countries/WMST 558
- POLS 647: Seminar on Latin America
- POLS 649: Seminar in Comparative Politics
- SPAN 524: Introduction to Hispanic Linguistics
- SPAN 527: Latin American Literature: Colonial Period through 19th Century
- SPAN 528: Contemporary Spanish-American Theater
- SPAN 529: Spanish-American Poetry
- SPAN 530: Spanish-American Narrative
- SPAN 554/654: Hispanic Culture through Film and Media
- SPAN 599: Special Topics
- SPAN 624: Studies in Hispanic Linguistics
- SPAN 634: Spanish for the Workplace
- SPAN 644: Origins and Development of Hispanic Culture
- SPAN 648: Contemporary Issues in the Hispanic World
- SPAN 670: Special Topics
- WGST 558: Women in Developing Countries
- WGST 593: Global Feminism

Kent School of Social Work

Terry L. Singer, Ph.D., Dean

The Kent School of Social Work offers the following programs through the Graduate School:

Social Work – Ph.D.

Social Work – M.S.S.W.

Marriage and Family Therapy – Post Master's Certificate

Doctor of Philosophy in Social Work

Major Code: SW

Degree Code: PHD

Unit: GK

Department Webpage: <http://www.louisville.edu/kent/doctoral/>

General Information

Graduates will be prepared to serve as (a) faculty members in social work programs in Kentucky colleges and universities and institutions nationally, or (b) administrators, planners, policy analysts, and program evaluators in a broad range of social service agencies.

The Commonwealth's first doctoral program in social work offers the opportunity for academically motivated master's level social workers to continue their studies at the doctoral level. Graduates will be prepared to serve as (a) faculty members in social work programs in Kentucky colleges and universities and institutions nationally, or (b) administrators, planners, policy analysts, and program evaluators in a broad range of social service agencies.

Application to the Doctoral Program

To apply to the doctoral program in Social send the following materials by February 1 to:

Ruth Huber, Ph.D., Director
Ph.D. Program in Social Work
Kent School of Social Work
University of Louisville
Louisville, KY 40292

1. Completed Graduate School Application
2. Application for Admission to the UL Ph.D. in Social Work Program

3. Official transcripts from each college/university attended, and documentation of the receipt of a Master's Degree in Social Work, e.g. M.S.W., M.S.S.W.
4. Official report of GRE scores
5. Three recommendations from the Graduate School Application (at least two from academicians).
6. Application fee of \$50 unless U of L is the most recent school you attended
7. A current resume
8. A sample of scholarly or professional writing
9. A personal statement of career goals, research interests, and reasons for pursuing doctoral studies (no more than 3 pages).

The admission process involves the following:

- Review of application materials by the doctoral admissions committee
- Admission committee interviews with those recommended
- Review by the Graduate School

Doctoral Admission Requirements

Students are expected to hold master's degrees in Social Work, i.e. M.S.W., M.S.S.W., from programs accredited by the Council on Social Work Education (CSWE), or international equivalents.

Doctoral Program Requirements

Core Courses	Semester Hours	Cumulative Total Hours
Advanced Research Design & Analysis I	6	6
Advanced Research Design & Analysis II	6	12
Advanced Research Design & Analysis III	3	15
Professional Seminar I	1	16
Professional Seminar II	1	17
Teaching in Social Work	3	20
Change Theories in Social Work	3	23
Ethics, Social Work, and Society	3	26
Advanced Analysis of Social Welfare Problems	3	29

Theory and Model Development	3	32
Advanced Measurement in Social Work Research	3	35
Advanced Qualitative Research	3	38
Research Practicum	3	41
Individualized Studies and Dissertation Hours		
Individualized Studies	9	50
Dissertation	6	56

Doctoral Qualifying Examination

The purpose of the qualifying examination is to provide a vehicle through which students can demonstrate their abilities to apply and integrate the whole of their educational experiences by adequately addressing complex questions pertinent to the current and developing knowledge base of social work. A student is eligible to take the qualifying examinations upon successful completion of 50 credits of core and other course work. Students are expected to provide answers that integrate knowledge from all required courses. Following the passage of the qualifying examination, students are admitted to Candidacy Status.

Doctoral Dissertation

After admission to candidacy, students proceed to propose, complete, and defend their dissertations. The dissertation must represent independent research and should be based on original research questions or hypotheses. Dissertation committees have at least five members, one of whom is from the University of Kentucky. Otherwise, the program at each university follows the policies and procedures of their respective institutions regarding the formation and membership of dissertation committees.

Academic Policies

Doctoral students are expected to have taken their qualifying exams by the time they are in the program 4 years, and complete the program in four additional years.

Master of Science in Social Work

Major Code: SW

Degree Code: MSSW

Unit: GK

Department Webpage: <http://www.louisville.edu/kent/doctoral/>

Accreditation of the M.S.S.W.

The Master of Science in Social Work program is accredited by the Council on Social Work Education. The Master of Science in Social Work with a Specialization in Marriage and Family Therapy Program and the Post Masters Certificate Family Therapy Program is accredited by the Commission on Accreditation for Marriage and Family Education.

General Information

The Kent School of Social work seeks to prepare competently trained social workers who practice from a strong professional value base to serve the metropolitan mission of the university. These social workers are educated to practice with individuals, families, and communities and to promote social justice. In the context of a research institution, the Kent School is committed to knowledge development that informs the practice of social work, recognizing the importance of collaboration among differing disciplines to solve complex social problems.

Social work is a profession concerned with the prevention and amelioration of social problems and the enhancement of the quality of human life. Social workers achieve these goals through direct practice with individuals, families, groups, and community organizations; advocacy; social planning; social policy analysis and formulation; research; and administration. Social work practice helps people mobilize their resources to deal with present circumstances and to enlarge their prospects for the future. Since problems of the individual cannot be seen in any meaningful way in isolation from the broad social and community context in which they occur, social work also takes a leadership role in bringing about institutional and social change.

Admission Procedures

Persons interested in admission to the Kent School should visit <http://www.louisville.edu/kent> or contact the Coordinator of Admissions/Student Services, Kent School of Social Work, Oppenheimer Hall, University of Louisville, Louisville, Kentucky 40292 (502) 852-0414.

Kent School seeks mature students with a demonstrated ability to work with people, emotional stability, good interpersonal skills, good health, and the ability to perform well academically. To ensure that entering students meet these standards, the faculty has set the following requirements:

- A bachelor's degree from a regionally accredited institution of higher learning;
- A minimum of 27 credit hours in the liberal arts, i.e. communications (6), natural sciences (3), humanities (9), and social sciences (9),
- A minimum of three credit hours in each of the following courses: statistics, research methodology, and human biology.

Additionally, an undergraduate GPA of 3.00 is recommended for you to be considered for admission to Kent School. While we consider applicants whose undergraduate GPA does not

meet this standard, applicants with GPAs less than 2.75 must take the Miller Analogies Test or the Graduate Record Exam.

The application file is complete when all of the following are received by the Office of Graduate Admissions, University of Louisville, Louisville, Kentucky 40292:

1. \$50 non-refundable application processing fee. Attach a personal check, money order or cashier's check (U.S. dollars) payable to the University of Louisville to the front of your completed application. If you apply on-line, you must also pay your application fee on-line with a credit card or electronic-check at that time. Note: Paying your application fee on-line with an electronic-check will delay the process for 8 days.
2. Completed and signed application form. It is recommended that the application be typed. Application forms are available on-line at http://graduate.louisville.edu/request_info/admissions.html.
3. An official academic transcript – is required from each college/university you have attended including those at which you were enrolled for academic credit as a non-degree student and/or credits which you transferred to another college. All transcripts must bear the official seal and signature of the institution attended. You must request these transcripts directly from the Registrar or appropriate officer of each institution and ask that they send them directly to the Office of Graduate Admissions, University of Louisville, Louisville, KY 40292. If you are a University of Louisville graduate, your U of L transcript will be provided automatically, with no request needed from you. Applicants with a cumulative grade point average less than 2.75 are required to take the Miller Analogies Test (MAT) or the Graduate Record Exam (GRE). Dates of MAT tests and test links to the GRE are available at <http://www.louisville.edu/student/services/testing/index.html>.
4. Three recommendations – each submitted on a University of Louisville Recommendation of Graduate School Form in a sealed, signed envelope. Recommendation forms are available on-line at: <http://graduate.louisville.edu/app/grad-rec.pdf>. We suggest you submit evaluations from persons who have been directly responsible for assessing your human service related work/volunteer experience and academic performance. The Kent School requires three recommendation forms, however letters accompanying the forms are welcomed and encouraged. Applicants who wish to be considered for Advanced Standing are required to have one of their three letters of recommendation from their Director of Field Education.
5. Personal statement - This statement must be submitted with the application for admission. Submit a carefully written personal statement of approximately 700-1000 words that addresses the following four topics:
 - Describe a social problem or problem strategy that is of greatest interest to you.
 - Describe your commitment to engage in social work roles that involve social welfare institutions and systems most likely to have an effect on major social problems.

- Describe in detail how you would insure that your work is relevant to the most economically and socially disadvantaged groups in our society.
- Describe the intellectual and personal qualifications that will enable you to practice social work successfully.

Note: If there are gaps or deficiencies in your academic record, please address these in an addendum to your statement.

The personal statement may be emailed to gradadm@louisville.edu as an attachment.

6. Statement of authenticity - Each applicant is required to add the following statement to the beginning of their personal statement accompanied by the applicant’s signature and date of signature.

“Academic dishonesty is prohibited at the University of Louisville. In keeping with this policy, I certify the material contained in this application is solely my work and that I have neither cheated nor plagiarized in its creation.”

7. The Test of English as a Foreign Language (TOEFL) is required for applicants whose native language is not English. A test link to the TOEFL is available at <http://www.louisville.edu/student/services/testing/index.html>.

8. International students may be required to have their transcripts evaluated by a credential evaluation service in the U.S. Two possible services include Worldwide Education Services, Inc., at <http://www.wes.org> and Educational Credential Evaluators at <http://www.ece.org>.

9. If you have been convicted of a felony, please include a description of the circumstances and outcomes of the conviction. Prior convictions for criminal offenses may preclude one’s ability to be licensed as a social worker in many states.

All of the above materials must be received in the Office of Graduate Admissions by one of the deadlines in the year in which you hope to begin coursework.

M.S.S.W. Entry Date

New students enroll in the fall semester only.

M.S.S.W. Admission Application Date

Consideration of applications begins in November. The final deadline varies as explained below, but because entry into the program is highly competitive, applicants are encouraged to submit their applications early to ensure a space. All admissions materials must be received in the Office of Graduate Admissions by the deadline date in order for an applicant to be considered for admission by a particular deadline. Earlier applicants have more options and enjoy clear advantages. Kent School deadlines for admission are classified as follows:

- February 15 Early Bird Admission
- May 15 Traditional Admission
- June 11 Extended Admission
- July 30 Part-time Admission

Complete* applications by:	Options Available	Options No Longer Available
February 15 (early bird admission)	Students are eligible for : <ul style="list-style-type: none"> • Field placement (the earlier students apply, the greater the selection available) • Scholarships 	N/A
	<ul style="list-style-type: none"> • Federal Work Study/Community Service Program (a Financial Aid program) Additionally, students: <ul style="list-style-type: none"> • Have the time to complete necessary prerequisites classes before Fall term. • May register at earliest registration opportunity, with maximum scheduling choices. 	
May 15 (traditional admission)	Students are eligible for: <ul style="list-style-type: none"> • Field placement (practicum selections become more limited) • Scholarships • Registration continues (scheduling choices more limited) 	No Federal Work Study available unless practicum is set up by May 15. Prerequisite classes harder to find and there is less time to take them.
June 11 (extended admission)	Students are eligible for: <ul style="list-style-type: none"> • Field placement (practicum selections become even more limited) • Registration continues (scheduling choices even more limited) 	No Scholarships available. No Federal Work Study available. Prerequisite classes harder to find.

July 30 (part-time admission)	Students considered for the part-time program on a space available basis .	No field placement options. No Scholarships available. No Federal Work Study available. Prerequisite classes harder to find.
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*Complete means all materials are received in Graduate Admissions by deadline date.

M.S.S.W. Admission Status

The graduate curriculum is organized into a four (4) semester, sixty (60) hour sequence of classroom courses and field education over a 16 month period, progressing from a generalist base to concentration work in either direct or macro practice. Students who are admitted and do not have a Council on Social Work Education accredited Bachelor of Social Work degree enter the REGULAR PROGRAM four (4) semester, sixty (60) hour program. Students holding a CSWE accredited Bachelor of Social Work degree with a cumulative grade point average of 3.00 who have demonstrated good academic performance in their social work courses may be enrolled in ADVANCED STANDING and complete the thirty (30) hour advanced portion of the program. No academic credit is given for life or work experience. Advanced Standing is limited to applicants who have earned B.S.W. degrees within the last five (5) years, at the time of enrollment in the Kent School.

The Weekend Program offers, particularly for working students or commuters from other geographic areas, an opportunity to earn an M.S.S.W. degree by attending classes on Friday evenings and Saturday. Part-time students must enroll for a minimum of 6 credit hours each semester. All part-time students enrolled in Kent must complete the program within 4 years. For more information about all of the possible curriculum modules, please refer to the Kent School's Catalogue online at the future students portion of the Kent School website, <http://www.louisville.edu/kent>.

The Kent School, in an ongoing collaborative effort to bring its M.S.S.W. program to professionals in more remote areas who already have a baccalaureate degree in social work, offers an Alternative M.S.S.W. Weekend Program in conjunction with Brescia University. Please refer to the Kent School's Catalogue online at <http://www.louisville.edu/kent>.

Curriculum Requirements

M.S.S.W. Curriculum

The graduate social work curriculum is guided by the precepts of the mission of the Kent School to prepare competently trained social workers who practice from a strong professional value base to serve the metropolitan mission of the University. The foundation year of the curriculum prepares students for

generalist practice within the context of a structural approach to social work. The advanced or concentration year provides two avenues of concentration for students to develop specialized skills and knowledge. Students choose one of these two options; either one in advanced direct practice or one in advanced macro practice.

M.S.S.W. Foundation Curriculum

The foundation year of study prepares students for generalist practice with multi-level systems; individuals, families, groups, organizations, and communities. It is built upon a liberal arts base that provides students with a perspective that society is a complex organization of diverse people and ideas, each of which includes strengths upon which society may prosper and grow. The Kent School approaches foundational learning through the lens of a structural model of practice that is based on an awareness of systematic inequalities in the distribution of society's resources. It further purports a belief in distributive justice that holds as primary each person's need for and right to a fair share of the benefits of society. Students who complete this first year of study will be able to assess social problems in a multi-dimensional framework that allows them to create strategies for intervening in complex problem-solving at various levels of systems and that builds upon the strengths inherent in those systems.

M.S.S.W. Concentration Curriculum

In the advanced year of the curriculum, students may elect to enroll in a concentration of either advanced direct practice or advanced macro practice. Each concentration develops on the strength of the liberal arts base and foundational generalist perspective from the first year of the curriculum. Both of these practice concentrations take a social constructionist perspective, particularly the idea that there are multiple realities, and that these realities are socially constructed. In each of these concentrations, students enroll concurrently in a designated practice course and a field practicum assignment that parallels the practice interests of the concentration. In addition, advanced research courses provide the student with additional skills in measuring practice of effectiveness at this advanced level of practice.

M.S.S.W. Advanced Direct Practice

The advanced direct practice curriculum emphasizes the interrelatedness of environmental conditions and individual, family, and group dynamics as they relate to personal, interpersonal, and social problems. The populations specifically targeted by this approach transect all socio-economic classes; however, special attention is given to high-risk client populations. Various models are examined with appropriate intervention modalities. Psychosocial and structural theories are emphasized with respective intervention techniques and skills. Advanced direct practice provides content related to smaller systems such as individuals and families, and is guided by a narrative framework. Narrative social work practice is neither pathology-based, nor victim-blaming, and operates from the assumption

that there are many ways to interpret lived experience. The Kent School Advanced Direct Practitioner understands the profound role of power in all human relationships, the role of history in creating meaning, that negotiated meanings influence the actions available to us, and maintains respect for the diverse lives and experiences of clients.

M.S.S.W. Advanced Macro Practice

The growing complexity and cost of contemporary social welfare services demand able administrators, social planners, and policy analysts. These professionals must be skilled in modern management, policy analysis, and strategic planning techniques, and be capable of monitoring and evaluating the impact of social policies, programs, and services. Administration, policy, and planning methods include those areas of professional social work practice commonly referred to as agency administration, management, and staff development; policy analysis; program design, implementation and evaluation; organizational development; and community planning and organization. The courses emphasize development of strategies and skills for effective practice in the roles of health and welfare planner and developer, program consultant, policy analyst, middle manager, supervisor, staff trainer, program director, and grass-roots organizer. The advanced macro practice curriculum is directed at organizational systems and seeks to provide specialized knowledge and skills that increase students' abilities to work with contemporary problems, issues and practices in the administration of human service delivery systems. Management and critical analysis skills are honed in content related to policy development and organizational effectiveness. Multiple realities, as reflected in a competing values paradigm, affect organizational life and parallel the process of smaller system intervention. In that regard, advanced macro practice prepares students to understand organizational complexity and to develop effective administrative tools to manage service delivery.

M.S.S.W. Practicum Education

For additional information, please go to: <http://www.louisville.edu/kent/masters/practicum>. All students admitted to the 60 credit-hour program are required to complete satisfactorily SW 670, SW 671, SW 672 and SW 673 (900 clock hours) in approved practicum sites. Students admitted to the 30 credit-hour program are required to complete satisfactorily SW 672 and SW 673 (450 clock hours) practicum in an approved site. A growing number of students face the necessity of having to be employed full time while undertaking their MSSW degree requirements. The Kent School Faculty understands this and tries to address such circumstances through both the evening and weekend classroom course schedule and through certain options in undertaking the practicum requirements. The School's present policies about on-job field placements are explained below and in The Practicum Education Handbook. If employed in a human services agency meeting the School's criteria as a placement site, the student may apply to undertake the practicum at her/his place of employment. This may be accomplished when the agency is willing to shift the student's

work role and supervision in such a manner as necessary to meet the School's educational objectives for practicum instruction. Practicum education is offered in a concurrent format so that students enrolled in a practicum course simultaneously must be enrolled in a practice course, i.e.; SW 670 with SW 604, SW 671 with SW 605, SW 672 with either SW 640 or 691, and SW 673 with either SW 641 or SW 692.

M.S.S.W. Electives

The Kent School of Social Work provides electives as enrichment to the specialized learning in the concentration year. Social work jobs call for skills and knowledge that are broader than any narrowly defined specialization. For example, mental health workers are asked to know psychopathology, substance abuse, managed care, AIDS, and a range of other substantive areas. Many school social workers share the need for the same content. In addition, it is noted that social workers frequently change jobs, often to another field of practice. Social work education seeks to teach students to think critically, analyze systematically, and know where to find information and resources within the context of social work history, development and values. It is this type of education that best prepares students to function in a rapidly changing society.

In this curriculum paradigm, electives are considered enrichment. Some of this enrichment is in the form of very specific course content that aligns with a concentration. For example, a person in a direct practice concentration may elect to take a course in psychopathology to prepare for work in a mental health center or private practice. In another case, the enrichment may take the form of a complementary course such as a direct practice student taking a management course to prepare for career possibilities or the administrative student taking a course in family intervention to understand the complexities of family practice. Or, the enrichment may take the form of exploration as in the case of the student taking an aging or child welfare course to better understand those fields of practice and to prepare for various job prospects. Finally, the enrichment may include a course of general interest such as a women's issues course which crosses numerous concentration lines, but may not correspond specifically to the direct focus of the advanced practice.

Students are eligible to take electives anytime following completion of the foundation, or at a minimum, after completing two human behavior courses, two social policy courses and the human diversity course. This coursework forms the basis of understanding social work concepts sufficiently to generate enrichment interest. Students are discouraged from taking practice-focused electives until completing generalist practice courses or at least taking such coursework concurrently. The program leading to the degree of Master of Science in Social Work focuses on developing professional leaders in social work practice. The program connects an intensive academic component with a practicum, allowing the student to learn and immediately apply theory.

M.S.S.W. Dual Degree Programs

The Kent School also offers joint degrees with the Brandeis School of Law at the University of Louisville (M.S.S.W./J.D.), the Louisville Presbyterian Seminary (M.S.S.W./M.Div.), the Department of Pan-African Studies at the University of Louisville (M.S.S.W./M.A.) and the Department of Women's and Gender Studies (M.S.S.W./M.A.) at the University of Louisville. Applications must be submitted independently to each academic unit/institution. Additionally, the Kent School offers the opportunity to earn a specialization in Marriage and Family Therapy (MFT) or School Social Work while obtaining your M.S.S.W. Lastly, Kent offers the Alcohol and Drug Counselor Specialization (ADCS). In general, all of these programs require the student to taking electives in a particular concentration and take a targeted advanced practicum. Dual degree programs require additional coursework, while the specializations may or may require additional coursework. For more complete descriptions of these programs, please refer to the Kent School website: <http://www.louisville.edu/kent>.

M.S.S.W./Master in Divinity

The joint M.S.S.W./M.Div. program recognizes the value of professional education in two interrelated fields and encourages students who have an interest in both ministry and social work to pursue these degrees simultaneously. A student may enter the dual degree program from social work or theology.

M.S.S.W./Juris Doctor

The dual M.S.S.W./J.D. program recognizes the value of interdisciplinary study and encourages students having an interest in both social work and law to pursue these degrees simultaneously. Social workers and lawyers often seek to address identical or related societal concerns, albeit from different perspectives; understanding both disciplines enhances one's effectiveness in both professional capacities. Law courses strengthen the social worker's understanding of legal doctrine and structures that have impact on social institutions and human conditions; social work courses help lawyers to better understand human behavior, conflict resolution and social welfare institutions.

M.S.S.W./M.A. in Pan-African Studies

The dual M.S.S.W./PAS program recognizes the value of professional education in two interrelated fields and encourages students who have an interest in both Pan-African Studies and Social Work to pursue these degrees simultaneously. Social workers and Pan-African studies scholars often seek to address identical or related societal concerns, albeit from different perspectives; understanding both disciplines enhances one's effectiveness in both the analysis of and engagement with contemporary social and cultural issues. Pan-African Studies courses strengthen the social worker's understanding of the historical foundations for policies and structures that have an impact on social institutions and human conditions; social work courses help Pan-African scholars or activists to better

understand human behavior, conflict resolution and social welfare institutions. A Pan African Studies and Social Work combination provides the tools of social change for an historic problem of racial injustice.

M.S.S.W./M.A. in Women's and Gender Studies

The dual M.S.S.W./ WGST program recognizes the value of professional education in two interrelated fields and encourages students who have an interest in both Women's and Gender Studies and Social Work to pursue these degrees simultaneously. Social workers and Women's and Gender Studies scholars often seek to address identical or related societal concerns, albeit from different perspectives; understanding both disciplines enhances one's effectiveness in both the analysis of and engagement with contemporary social and cultural issues. Women's and Gender Studies courses strengthen the social worker's understanding of the historical foundations for policies and structures that have an impact on social institutions and human conditions; social work courses help Women's and Gender Studies scholars or activists to better understand human behavior, conflict resolution and social welfare institutions. A Women's and Gender Studies and Social Work combination provides the tools of social change for an historic problem of gender inequality and injustice.

M.S.S.W. Specializations

For more complete descriptions of the following specializations, please refer to the Kent School website: <http://www.louisville.edu/kent>.

Marriage and Family Therapy

Student may complete the Specialization in Marriage and Family Therapy program as part of the MSSW degree. The program prepares students for clinical practice with families in the context of their communities, particularly those families who are disadvantages and/or typically underserved. Completion of the program prepares students for licensure as a marriage and family therapist in Kentucky and for clinical membership in the American Association for Marriage and Family Therapy. The M.S.S.W./MFT specialization requires 14 graduate credit hours in addition to the 60 hours required for the MSSW.

School Social Work

M.S.S.W. students who want to practice social work in a school setting can earn a school social work specialization within the Kent School master's curriculum. Students who select this specialization learn how to help children and families overcome barriers to learning through home intervention. Those who complete the specialization meet the Kentucky Council on Teacher Education's requirements for certification as a school social worker. The specialization is open to students in both the macro and direct practice concentrations.

Alcohol and Drug Counselor Specialization (ADCS)

Substance abuse is widely recognized as one of the top health problems in the USA and is attracting increasing attention and funding. However, there is an identified shortage of qualified addiction counselors—and students who prepare themselves for a career in chemical dependency can hope to gain immediate employment after graduation, and possibly before. In this regard, students should be aware of a professional certification, the Certified Alcohol and Drug Counselor (CADC) certification that are valued by addiction treatment agencies with comparable respect and compensation as the Licensed Clinical Social Work (LCSW) qualification. For those who are interested in initiating their careers in a clinical substance abuse treatment setting, they can begin to fulfill specialized requirements of the CADC certification while completing normal requirements of the M.S.S.W. program. The Kent School's ADCS program will (1) satisfy many of the requirements of the CADC program (2) teach specialized knowledge and skills; (3) provide formal recognition of your specialized knowledge; (4) position students for employment and advancement in a broad array of specialized substance abuse roles; and (5) include specialized faculty mentoring and suggestions on finding employment.

M.S.S.W. Curriculum Plans

60 Credit Hour Curriculum (all courses are 3 credit hours each)

FOUNDATION COURSEWORK

- Human Behavior in the Social Environment I (HBSE) fall only
- 619 Human Behavior in the Social Environment II spring only
- 602 Social Welfare Institutions, Policies and Services fall only
- 622 Issues in Policy & Service Delivery spring only
- 603 Human Diversity fall and summer only
- 604 Social Work Practice I fall only
- 605 Social Work Practice II spring only
- 670 Practicum I (16 clock hours per week) fall only
- 671 Practicum II (16 clock hours per week) spring only
- 626 Research Methodology spring and summer only

ADVANCED COURSEWORK (pre-requisite all Foundation courses)

- 640 Adv Direct Practice I or 691 Adv Macro Practice I fall only
- 641 Adv Direct Practice II or 692 Adv Macro Practice II spring only
- 668 Adv Research Practice I fall only
- 669 Adv Research Practice II spring only
- 673 Adv Practicum I (16 clock hours per week) fall only
- 674 Adv Practicum II (16 clock hours per week) spring only
- Electives (4 electives are required - 12 credit hours)

30 Credit Hour Curriculum (students with a CSWE accredited Bachelor of Social Work degree with a cumulative grade point average of 3.00)

ADVANCED COURSEWORK

- 640 Adv Direct Practice I or 691 Adv Macro Practice I fall only
- 641 Adv Direct Practice II or 692 Adv Macro Practice II spring only
- Practice II
- 668 Adv Research Practice I fall only
- 669 Adv Research Practice II spring only
- 672 Adv Practicum I (16 clock hours per week) fall only
- 673 Adv Practicum II (16 clock hours per week) spring only
- Electives (4 electives are required - 12 credit hours)

Program Curriculum Requirements

A complete description of possible 30 and 60 hour curriculum plans can be found at the Kent School website: <http://www.louisville.edu/kent>.

Departmental Faculty

Professors

Terry L. Singer, *Dean*
 Riaan Van Zyl, *Associate Dean of Research*
 Anita P. Barbee
 Gerald Barber
 Joseph H. Brown
 Dana N. Christensen
 Ruth Huber, *Director of Doctoral Program*
 Thomas R. Lawson, *Director of International Program*
 Carol Tully

Associate Professors

Anna C Faul, *Associate Dean of Academic Affairs*
 Pamela Yankeelov, *Associate Dean of Student Services*
 Stanley R. Frager
 Sharon Moore
 Bibhuti Sar, *Director CFL Program*
 Sally St. George, *Director, Marriage and Family Therapy Program*
 Daniel Wulff

Assistant Professors

Richard Cloud
 Wanda Collins
 Andy Frey
 Seana Golder

Assistant Research Professors

Becky F. Antle
 Linda K. Bledsoe
 Kevin W. Borders
 Christopher Hall
 Noell Rowan
 Dana Sullivan
 Ramona Stone

Instructors

Lisa Barrett

Martha Fuller, *Director of Practicum*

Kim Wadlington

Post Master's Certificate in Marriage and Family Therapy

The Family Therapy Program in the Kent School of Social Work in collaboration with the Archdiocese of Louisville Counseling Center offers the Post Masters Certificate in Marriage and Family Therapy (MFT). This certificate program is designed for those who already hold a masters degree from a regionally accredited institution in a human services field to pursue advanced study and supervised practice in marriage and family therapy. The Post Masters Certificate in MFT meets course requirements for Kentucky licensure in MFT and for Clinical Membership in the American Association for Marriage and Family Therapy (AAMFT). Coursework focuses on theoretical foundations, practical applications, ethical responsibilities, integration of research, and supervised clinical practice.

The Certificate Program is comprised of coursework and supervised practice. Courses are offered on Fridays on the Belknap Campus of the University of Louisville during fall and spring semesters. Supervised practice includes (1) a live supervision class that meets one evening per week at The Archdiocese of Louisville Counseling Center, (2) a one-hour individual supervision session each week, and (3) additional time as needed to attain practicum requirements.

The certificate program is structured for the student to complete the requirements in two calendar years, a new cohort of students beginning in the summer semester of each year. Requirements include six (6) courses concurrent with 500 hours of supervised clinical practice and 100 hours of approved supervision.

The Post Masters Certificate in MFT has been accredited since 1990 by COAMFTE.

Tuition for coursework is paid to the University of Louisville. Supervised practice fees are paid directly to The Archdiocese of Louisville Counseling Center. Supervised Practice fees are \$2000 per year and may be paid in monthly or semester installments. Students must have employment or a volunteer placement that provides 3-5 hours of ongoing clinical contact per week with individuals, couples, or families. Students are expected to join AAMFT (American Association for Marriage and Family Therapy) as student members, to attend one major conference in MFT, and to volunteer service to KAMFT (Kentucky Association for Marriage and Family Therapy) each year. Students must also have liability insurance to begin practicum.

Prerequisites

Prerequisites are required, but will vary depending upon the student's specific master's program.

- One (1) three semester hour course in *clinical practice* (e.g., MFT practice models, family and/or individual mental health assessment, interventions with specific clinical populations/problems).
- Three (3) three semester hour courses in *individual development and family relations* (e.g., sexuality issues, gender, sexual orientation, cultural diversity, human growth and development, personality, human behavior in the social environment).
- One (1) three semester hour course in *research* (e.g., methodology, data analysis, evaluation).
- One (1) three semester hour course in an area of specific professional interest.
- A semester long practicum.

Admissions

Prospective students must submit the following completed materials:

1. The University of Louisville Graduate School Application; http://graduate.louisville.edu/request_info/admissions.html
2. An official copy of transcripts from all colleges or universities attended;
3. *Three (3) (please note difference from graduate school application) letters of recommendation indicating potential for success in the program;*
4. A letter of intent that explains the applicant's
 - interest in applying to this program,
 - knowledge of family therapy,
 - work experience (voluntary or paid) in human services,
 - affiliation with professional organizations (including conference attendance),
 - professional goals and expectations.
5. A current résumé.
6. A five-page summary of significant family-of-origin experiences that reflects the applicant's exploration of personal growth issues which may be relevant in one's development as a family therapist.

Application materials required by the Graduate School of the University of Louisville (#1, #2, #3 above) should be sent directly to:

Graduate Admissions
University of Louisville
105 Houchens
Louisville, Kentucky 40292

The specific application materials for the Post Masters Certificate in MFT (#4, #5, #6 above) should be sent electronically to:

Dr. Sally St. George
Co-Director, Family Therapy Program
st.george@louisville.edu
(502) 852-2520

It is advisable to call the Program Director's Office to check on the status of your application. Each application will be reviewed by the Family Therapy Program Co-Directors. Upon satisfactory review of the student's MFT application materials (which includes completion of all prerequisites by the summer start date), an interview will be scheduled with the Family Therapy Program Co-Directors. Enrollment is limited.

The Post Masters Certificate Program does not discriminate on the basis of age, gender, race, sexual orientation, disability status, national origin or religion. The Post Masters Certificate in MFT within the Kent School of Social Work at the University of Louisville is accredited by the Commission on Accreditation for Marriage and Family Therapy Education (COAM-FTE) of the American Association for Marriage and Family Therapy (AAMFT), 112 South Alfred Street, Alexandria, VA 22314, (703) 838-9808.

Family Therapy Program Faculty

Tom Robbins, Ph.D., Director of the Archdiocese of Louisville Counseling Center
Sally St. George, Ph.D., Assistant Professor, Co-Director of the Family Therapy Program
Dan Wulff, Ph.D., Assistant Professor, Co-Director of the Family Therapy Program

School of Medicine

Mark Pfeiffer, M.D., Acting Dean

The School of Medicine offers the following Masters and Doctoral Programs through the Graduate School:

Anatomical Sciences and Neurobiology – Ph.D.

Anatomical Sciences and Neurobiology – M.S.

Audiology – D. Au.

Biochemistry and Molecular Biology – Ph.D.

Biochemistry and Molecular Biology – M.S.

Communicative Disorders – M.S.

Microbiology and Immunology – Ph.D.

Microbiology and Immunology – M.S.

Pharmacology and Toxicology – Ph.D.

Pharmacology and Toxicology – M.S.

Physiology and Biophysics – Ph.D.

Physiology and Biophysics – M.S.

Doctor of Philosophy in Anatomical Sciences and Neurobiology

Major Code: ASNB

Degree Code: PHD

Unit: GM

Department Webpage: <http://www.louisville.edu/medschool/anatomy/>

General Information

Our philosophy is to encourage academic excellence in the anatomy and neurosciences within a framework of structure-function relationships at the molecular, cellular, and systemic levels. We strive to prepare students with sufficient background depth to excel in high tech cutting-edge translational (applied) research environments and the more traditional multidisciplinary academic setting. We provide students with innovative approaches to important issues in neuroscience research including development, organization and plasticity. Our research interests range from sensory and motor systems to stem cell replacement strategies for spinal cord injuries. In all approaches we strive to integrate the latest teaching modalities while maintaining the time-honored advantages of hands on, laboratory-based instruction.

The degree program is available to qualified individuals possessing a bachelor's degree from an accredited college or university. No specific undergraduate major is required, although a science background is preferred.

The Ph.D. degree is offered to students who plan to pursue a career in research and/or teaching, in an academic institution or within industry.

All degree programs require full time study, and it is expected that while participating in these programs students will devote full time effort toward completion of the degree requirements.

Program Admission Procedure

All students wishing to apply must submit an application to the Graduate School with the following documents:

1. A formal application submitted to the University of Louisville Graduate School Admissions Office (see website: <http://graduate.louisville.edu/app/> for forms and directions).
2. Application fee.
3. A minimum of two letters of recommendation.
4. Official transcripts of all college work.

5. Official scores on the Graduate Record Examination (GRE) General Test.
6. A brief statement of purpose describing your interests and career goals.
7. All international applicants whose native language is not English must submit Test of English as a Foreign Language (TOEFL) scores.

Program candidates are admitted in the fall semester (which begins in early August). Review of applications begins December 15 and continues until all positions are filled. Admission into the program is competitive, and applicants are encouraged to submit their applications early.

Requirements for the Ph.D. Degree

Ph.D. students must first complete the requirements for the non-thesis M.S. degree. Please refer to the Master of Sciences (Non-Thesis) in Anatomical Sciences and Neurobiology for program curriculum requirements and academic policies for this phase of the Ph.D. program. After completion of the non-thesis M.S., students will become a Ph.D. candidate and register for doctoral candidacy (DOCT).

Teaching Requirements

Each Ph.D. candidate must serve as a teaching assistant (T.A.) in at least one ASNB core course (listed in the non-thesis M.S. degree curriculum requirements). The specific course will be chosen by the student and his/her advisory committee.

Dissertation Defense

The Ph.D. candidate will focus exclusively on completing their research projects and writing a dissertation describing the results of their experiments. It is expected that the dissertation should contain data sufficient for approximately three publishable manuscripts. Upon completion of the dissertation, the student will distribute a copy to each committee member. The committee will have two weeks to read the dissertation and give approval to schedule a defense date or recommend changes that must be completed prior to scheduling a defense date. Once the dissertation is approved by the committee, the student will schedule a Dissertation Defense which will consist of an oral presentation to the department (approximately 45 minutes in length) of the research completed during the student's graduate training. Non-committee members in the audience will then ask questions. The general audience will then be dismissed and the student will defend his/her dissertation before the committee. Completion of the Ph.D. degree will be determined by majority vote of the committee.

Academic Policies

Satisfactory Progress

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Unsatisfactory performance may result in a recommendation for

immediate dismissal or academic probation, at the discretion of the Graduate Education Committee of the Department and the Dean of the Graduate School. A student may not remain in academic probation for more than one semester, after which his/her performance must equal or exceed the minimum requirements. If a probationary student does not achieve the minimum performance level, the Education Committee, independent of any Graduate School action, will consider recommending their dismissal from the program. In all cases, students receiving financial aid must maintain satisfactory progress in order to be eligible for continued financial support.

Satisfactory progress is assessed by a number of factors. For degree candidates, satisfactory progress involves maintaining steady progress in laboratory research, analysis, or the documentation of research results. The Dissertation Committee will evaluate the student's progress. Unsatisfactory progress will be reported to the Education Committee.

Satisfactory progress also involves maintaining the standards of academic and professional integrity. Plagiarism or other failures to maintain appropriate academic standards will result in the recommendation for immediate dismissal from the program.

Change in Guidelines

The Department reserves the right to change requirements at any time. When requirements change, the student may have the option of satisfying either the requirements in effect when he/she entered the program or the new requirements, depending on circumstances.

Master of Science in Anatomical Sciences and Neurobiology

Major Code: ASNB

Degree Code: MS

Unit: GM

Department Webpage: <http://www.louisville.edu/medschool/anatomy/>

Program Information

The degree program is available to qualified individuals possessing a bachelor's degree from an accredited college or university. No specific undergraduate major is required, although a science background is preferred.

The thesis M.S. degree is offered to students who want to continue their education in Anatomical Sciences and Neurobiology and offers the student the opportunity to improve his/her background for career development (i.e., to prepare for a career in teaching, or to prepare for further higher education programs such as a Ph.D. program, or Medical School).

All degree programs require full time study, and it is expected that while participating in these programs students will devote full time effort toward completion of the degree requirements.

Program Admission Procedure

All students wishing to apply must submit an application to the Graduate School with the following documents:

1. A formal application submitted to the University of Louisville Graduate School Admissions Office (see website: <http://graduate.louisville.edu/app/> for forms and directions).
2. Application fee.
3. A minimum of two letters of recommendation.
4. Official transcripts of all college work.
5. Official scores on the Graduate Record Examination (GRE) General Test.
6. A brief statement of purpose describing your interests and career goals.
7. All international applicants whose native language is not English must submit Test of English as a Foreign Language (TOEFL) scores.

Program candidates are admitted in the fall semester (which begins in early August). Review of applications begins December 15 and continues until all positions are filled. Admission into the program is competitive, and applicants are encouraged to submit their applications early.

Program Curriculum Requirements

Students should familiarize themselves with the Graduate School requirements for the Master's Degree as stated in the current U of L Graduate School Catalog. Briefly, a minimum of 30 semester hours is required for the Master's degree of which 15 semester hours must be in courses of the major subject area. At least one-half of the credits counted toward the degree must be of 600 level courses or above. The Department imposes the following additional requirements:

Students will successfully complete two of the following courses within the Department:

Course Requirements		Credit Hours
Gross Anatomy	ASNB 601	8.5
Microstructure and Development	ASNB 604	5.5
Neuroanatomy	ASNB 607	3
Neural Systems	ASNB 608	4

Dental Gross and Neuroanatomy	ASNB 672	3
Head and Neck Anatomy	ASNB 673	4
Dental Microscopic Anatomy	ASNB 671	5

In addition, Anatomy Seminar (ASNB 606, 1 credit hr) will be taken for credit each semester prior to candidacy. Additional courses (electives) within the Department or graduate level courses in other departments may be taken to achieve the minimum requirement of 30 credit hours. The student should consult with his/her advisor on the selection of the appropriate electives. The minimum number of hours that must be taken in the fall or spring semester is 9 (6 for summer). The maximum number of hours that may be taken in the fall or spring semester is 12 (or 15 hours if 3 or more are research hours). A maximum of 12 credit hours (including research hours) is the maximum for summer sessions.

After completion of all course work, students who have not completed the writing of their thesis must maintain master's candidacy by registering for MAST 600. This registration must be maintained year round (Fall, Spring and Summer) until the degree is awarded. Once a student registers for MAST 600, he/she may not register for additional courses. The statute of limitation for obtaining a Master's degree is six years maximum.

Original Research

Students will conduct this required research under the direction of a member or associate member of the Departmental faculty (hereafter known as the Thesis Advisor) who is also a member of the Graduate Faculty. Faculty reserve the right to decline accepting a student.

During the first year of residence, students are required to visit the laboratories of potential Advisors to become acquainted with the faculty and the research opportunities available. Selection of an Advisor and the initiation of a research project should be concluded prior to the end of the first year at which time a letter of agreement, signed by both the student and Thesis Advisor, will be filed with the Graduate Program Director.

Students must understand that the thesis Master of Science degree requires more than the completion of a prescribed curriculum of course work. Completion of a Thesis based on original research and its successful oral defense is a requirement for the thesis Master's degree. By its nature, original research does not always achieve positive results within a specific period of time. Therefore, no specific time can be given for the successful completion of this degree. Note that students are advised to complete the majority of their course work in the first year so that adequate time is allotted in the second year to complete their research and thesis. Specifically, students will be required to engage full-time in research for at least one academic semester plus two summers.

Reading Committee

The composition requirements of, and specific deadlines related to, the Reading Committee appear in the Graduate School Catalog. Briefly, the Reading Committee is composed of the student's Advisor and two other professors one of which is from a different department. All three must be members of the graduate faculty. This committee should be established shortly after the student and her/his Advisor agree on a specific research project. To avoid unnecessary delays the student should regularly consult with her/his Thesis Advisor and committee members concerning the direction and progress of the research project.

Thesis Defense

The M.S. candidate will focus exclusively on completing their research projects and writing a thesis describing the results of their experiments. It is expected that the thesis should contain data sufficient for approximately one publishable manuscript. Upon completion of the thesis, the student will distribute a copy to each committee member. The committee will have two weeks to read the thesis and give approval to schedule a defense date or recommend changes that must be completed prior to scheduling a defense date. Once the thesis is approved by the committee, the student will schedule a Thesis Defense which will consist of an oral presentation to the department (approximately 30 minutes in length) of the research completed during the student's graduate training. Non-committee members in the audience will then ask questions. The general audience will then be dismissed and the student will defend his/her thesis before the committee. Completion of the M.S. degree will be determined by majority vote of the committee.

Academic Policies

Satisfactory Progress

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Unsatisfactory performance may result in a recommendation for immediate dismissal or academic probation, at the discretion of the Graduate Education Committee of the Department and the Dean of the Graduate School.

A student may not remain in academic probation for more than one semester, after which his/her performance must equal or exceed the minimum requirements. If a probationary student does not achieve the minimum performance level, the Education Committee, independent of any Graduate School action, will consider recommending their dismissal from the program. In all cases, students receiving financial aid must maintain satisfactory progress in order to be eligible for continued financial support.

Satisfactory progress is assessed by a number of factors. While taking courses, students are required to maintain a minimum average grade of "B", i.e., a cumulative grade point of 3.0 on a 4.0 value scale. Deficiencies in the cumulative average grade generated through course work can not be overcome using

research credits (i.e. ASNB 616, 619 or 620). Unsatisfactory performance (i.e., GPA < 3.0) may result in a recommendation for immediate dismissal or in academic probation.

For degree candidates, satisfactory progress also involves maintaining steady progress in laboratory research, analysis, or the documentation of research results. The Reading Committee will evaluate the student's progress and unsatisfactory progress will be reported to the Education Committee.

Satisfactory progress also involves maintaining the standards of academic and professional integrity. Plagiarism or other failures to maintain appropriate academic standards will result in a recommendation for immediate dismissal from the program.

Administration

For administrative purposes, the Graduate Director will function as an interim advisor to a student until he/she has selected a Thesis or Dissertation Advisor.

Change in Guidelines

The Department reserves the right to change requirements at any time. When requirements change, the student may have the option of satisfying either the requirements in effect when he/she entered the program or the new requirements, depending on circumstances.

Master of Science (Non-Thesis) in Anatomical Sciences and Neurobiology

Major Code: ASNB

Degree Code: MS

Unit: GM

Department Webpage: <http://www.louisville.edu/medschool/anatomy/>

Program Information

Students who intend to complete a Ph.D. degree within the Department of Anatomical Sciences and Neurobiology (ASNB) are eligible to participate in the non-thesis M.S. program. For additional program information, please refer to the Doctor of Philosophy Program in Anatomical Sciences and Neurobiology.

Program Curriculum Requirements

Students are required to meet the Graduate School requirements for the M.S. degree as described in the current U of L Graduate School Catalog. ASNB imposes the following additional requirements¹:

¹Course substitutions can be made if approved by the ASNB Graduate Education Committee.

Course Requirements		Credit Hours
At least two lab rotations totaling 6 credit hours or more	ASNB 618	6
One methods course		3
Seminar each semester prior to candidacy	ASNB606	1/semester
At least 6 credits of the following core courses: ²		
Gross Anatomy	ASNB 601	8.5
Microstructure and Development	ASNB 604	5.5
Neuroanatomy	ASNB 607	3
Neural Systems	ASNB 608	4
Dental Gross and Neuroanatomy	ASNB 672	3
Head and Neck Anatomy	ASNB 673	4
Dental Microscopic Anatomy	ASNB 671	5
In addition to the core courses, at least 6 non-research hours inside the department		6
Students funded through the IPIBS Program must complete the following required courses:		
Biochemistry I	BIOCH/CHE545 or equivalent	3
Cell Biology	MBIO 667 or equivalent	3
Students funded through the IPIBS Program must also complete one of the following electives ² :		
Cellular and Molecular Immunology	MBIO 658	3
Neuroanatomy	ASNB 607	3

Neural Systems	ASNB 608	3
Physiology I	PHY 605	3
Physiology II	PHY 606	3

²ASNB 607 or 608 fulfill both core and elective requirements.

Laboratory Rotations

Each student will complete at least two rotations in different laboratories prior to start of their third semester. The objectives are to expose the student to different approaches and areas of research, and to assist the student in choosing a laboratory for dissertation research. For each rotation, the student will register for the 3 credit course Laboratory Rotation (ASNB 618) which is graded on a pass/fail basis. Once a student has completed a semester rotation in a given laboratory, they obtain credit for further research in that laboratory by registering for Original Investigation (ASNB 619).

Advisory Committee

The purpose of the advisory committee is to guide the student in developing a course of study that will prepare him or her for a successful career. To this end, the Committee may specify one or more of the courses to be taken by the student.

The committee will have five members, with at least one from outside ASNB. The Principal Advisor will serve as chair. The student, in conjunction with the advisor, should form a committee prior to the start of the third semester. Once the committee is formed, the student will meet with the committee at least twice per year. Following each meeting the mentor will submit a written brief summary of the meeting to be placed in the student's file.

Masters Candidacy

Following completion of all required coursework, each student is considered a Masters Candidate and will register as such (MAST).

Qualifying Exam

The purpose of the qualifying exam is to assure that the student has sufficient knowledge and skills to begin a research project. The exam will be taken within two terms (Fall, Spring or Summer terms) after the completion of required coursework. The exam consists of an oral presentation and defense of a research proposal (described below).

Prior to writing the Research Proposal, the student will develop an outline of the proposed experiments in coordination with their advisor and then present this outline to their committee. It is at this point, prior to writing the Research Proposal that the committee should recommend any changes in the research plan regarding, for example, too many or too few experiments; experiments that are too difficult; or experiments that may be more appropriate for addressing the research question. Once the committee is satisfied with the proposed experiments, the student will write a Research Proposal in the following general format.*

Literature Review

Section one will be an extensive literature review (similar to an expanded Background and Significance section of a National Institutes of Health grant proposal). This review should provide evidence that the student understands all background information relevant to the proposed research.

Hypotheses and Experiments

This section will consist of a list of the proposed hypotheses to be tested, and a brief description of the experiments that will be used to test these hypotheses.

Materials and Methods

This section will consist of a detailed description of the materials and methods that will be used to carry out the proposed experiments.

Expected Outcomes

This section will describe the expected results.

Potential Problems

This section will describe any potential problems that could occur, how they might affect interpretation of their research results, and how the student will address any potential problems.

*All students are encouraged to submit (in coordination with their advisor) an application for a National Institutes of Health Predoctoral National Research Service Award (F31) or a National Science Foundation Predoctoral Award. Therefore, the Research Proposal may be submitted in the format of a relevant application with the exception that the background and significance section should be expanded to include a more extensive literature review than permitted by the NIH or NSF page limitations.

Upon completion of the research proposal, the student will distribute a copy to each committee member, who will have two weeks to read the proposal.

The qualifying exam will be chaired by the student's advisor. The exam will begin with an oral presentation, open to all faculty, in which the student will present a short (approximately 20 min) overview of the research plan. The presentation will be followed by an oral defense to assess the student's readiness to conduct the proposed research, and their knowledge of all back-

ground information relevant to the proposed research. Non-committee members in the audience will then ask questions. The general audience will then be dismissed and the student will defend his/her proposal before the committee. Passing will be determined by majority vote of the committee. A student who fails the exam will have 2 months to retake the exam. Failure on the second attempt will result in dismissal from the program.

Upon successful completion of the exam, a written report stating the outcome of the exam will be signed by each committee member and will become a permanent part of the student's record. A passing vote indicates that the student has completed the requirements for a M.S. degree, and is a candidate for the Ph.D. degree.

Academic Policies

Satisfactory Progress

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Unsatisfactory performance may result in a recommendation for immediate dismissal or academic probation, at the discretion of the Graduate Education Committee of the Department and the Graduate Dean.

A student may not remain in academic probation for more than one semester, after which his/her performance must equal or exceed the minimum requirements. If a probationary student does not achieve the minimum performance level, the Education Committee, independent of any Graduate School action, will consider recommending their dismissal from the program. In all cases, students receiving financial aid must maintain satisfactory progress in order to be eligible for continued financial support.

Satisfactory progress is assessed by a number of factors. While taking courses, students are required to maintain a minimum average grade of "B", i.e., a cumulative grade point of 3.0 on a 4.0 value scale. Deficiencies in the cumulative average grade generated through course work can not be overcome using research credits (i.e. ASNB 616, 619 or 620). Unsatisfactory performance (i.e., GPA < 3.0) may result in a recommendation for immediate dismissal or academic probation.

For degree candidates, satisfactory progress also involves maintaining steady progress in laboratory research, analysis, or the documentation of research results. The Advisory Committee will evaluate the student's progress and unsatisfactory progress will be reported to the Education Committee.

Satisfactory progress also involves maintaining the standards of academic and professional integrity. Plagiarism or other failures to maintain appropriate academic standards will result in a recommendation for immediate dismissal from the program.

Administration

For administrative purposes, the Graduate Director will function as an interim advisor to a student until he/she has selected a Thesis or Dissertation Advisor.

Change in Guidelines

The Department reserves the right to change requirements at any time. When requirements change, the student may have the option of satisfying either the requirements in effect when he/she entered the program or the new requirements, depending on circumstances.

Departmental Faculty

Professors

Fred J. Roisen, *Chair*
 Kunwar P. Bhatnagar
 Martha E. Bickford, *Director, Graduate Program*
 Ferrell R. Campbell, *Director, Analytical Microscopy & Histology Lab*
 Nigel G.F. Cooper, *Vice-Chair for Research*
 Director, IPIBS
 Director, Molecular Neurobiology Core Lab
 Raymond H. Ho
 George D. Mower, *Course Director, Neuroanatomy Course*
Director, Neural Systems
 G. Stephen Nettleton, *Vice Chairman for Administration and Academic Affairs*
 Course Director, Medical Gross Anatomy
 Educational Coordinator
 Matthew Qiu, *Director, Neurochemistry Shared Instrumentation Lab*
 Michael T. Tseng, *Course Director, Dental Hygiene*

Associate Professors

Rita M. Colella, *Course Director, Medical Microstructure and Development*
 Kathleen M. Klueber, *Course Director, Dental Gross and Neuroanatomy*
 Course Director, Head and Neck Anatomy
 Nobuyuki Kuwabara
 Guillermo W. Rougier
 Assistant Professors
 Richard L. Benton
 Wm. Breck Carden
 Charles H. Hubscher
 Robin F. Krimm
 H. Wayne Lambert
 Robert F. Lundy
 Kelly Suter

Joint /Associate Appointments

Robert Acland
 Manuel Casanova, *Endowed Chair, Psychiatry*
 Irene Litvan, *Endowed Chair, Neurology*
 C. Patrick McGraw, *Neurological Surgery*
 Christopher Shields, *Chairman, Dept of Neurological Surgery*
 Gordon Tobin, *Plastic Surgery*
 Scott Whittemore, *Endowed Chair, Neurological Surgery*
 Fred L. Wightman, *Psychological & Brain Sciences: Surgery*

Professor John Barker, *Plastic Surgery*
 Rif El-Mallakh, *Psychiatry*
 John Johnson, *Chairman, Orthopedic Surgery*
 Marcia Jumblatt, *Ophthalmology & Visual Sciences*
 David Magnuson, *Neurological Surgery*
 Michael Voor, *Orthopedic Surgery*
 Xiao-Ming Xu, *Neurological Surgery*
 J. Patrick Moore, *Medicine*
 Gülgün Tezel, *Ophthalmology & Visual Sciences*
 Tongalp Tezel, *Ophthalmology & Visual Sciences*
 Welby Winstead, *Surgery*

Adjunct Faculty

Robert Aramant
 Claire Meena-Leist
 David Porta
 Mark Wiegand

Emeritus/Emerita

James B. Longley
 Kenneth Reid
 Richard Rink, *Course Director, Dental Microscopic Anatomy*
 Frank J. Swartz
 Richard H. Swigart
 Charles E. Wagner

Doctor of Audiology

Major Code: AUDI
 Degree Code: DAU
 Unit: GM
 Department Webpage: <http://www.louisville.edu/medschool/surgery/com-disorders/audiology/>

Program Information

The Doctor of Audiology Degree (D.Au.) is a four-year post bachelor's degree program leading to a professional degree conferred by the Graduate School. The program is physically located within the Louisville Medical Center and the University of Louisville Health Sciences Campus and administratively located in the Division of Communicative Disorders in the Department of Surgery. The faculty is committed to the clinical focus of the D.Au. degree and endeavor to bring real-world experiences to bear on the teaching environment. The faculty and staff of the Audiology Section actively participate in the provision of clinical services in both hospital and private practice arenas.

Students benefit by working side by side with the faculty and staff in an active and dynamic medical environment. Students will be able to interact with faculty, residents and medical students from other disciplines such as otolaryngology, speech pathology and pediatrics, not only in the provision of clinical services, but also in teaching and research endeavors.

Program Admission Procedure

Admission to the program will be for Fall term only, and applications must be received by January 1 of the application year. Applicants should submit all undergraduate transcripts, GRE scores and 3 letters of recommendation. Admission to the program is based on a favorable review of application material and an interview with the admissions committee.

Program Curriculum Requirements

The Doctor of Audiology degree program has been designed to meet the content and experience guidelines developed over the past decade by numerous professional organizations and associations. Curricular content areas and competencies are outlined on the following pages.

The curriculum begins with the student spending a significant amount of time in the classroom with a minimum amount of time in the clinical environment. Over the course of the four years, the ratio of classroom to clinic time reverses, so that the last year consists of virtually full-time clinical experience. During the fourth year, students will be given options for practical experiences in a variety of sites around the country.

Departmental Faculty

Professors

David R. Cunningham

Associate Professors

Ian M. Windmill

Assistant Professors

Jill E. Preminger

Doctor of Philosophy in Biochemistry and Molecular Biology

Major Code: BIOC

Degree Code: PHD

Unit: GM

Department Webpage: <http://biochemistry.louisville.edu/>

General Information

As teachers and scientists, the faculty of the Department of Biochemistry and Molecular Biology subscribe to the following missions:

- Provide up-to-date and high quality classroom and laboratory instruction in the discipline of biochemistry and molecular biology to students at the University.

- Conduct and publish research or other scholarship in areas that advance knowledge within the discipline, contribute to improving the human condition, or contribute to teaching.

Train students and post-doctoral fellows in biochemical research.

- Encourage and enhance the professional development of faculty colleagues, especially junior faculty.
- Serve as a resource for information on biochemistry and molecular biology for the University and the community at large.
- Contribute to the orderly and smooth functioning of the University by serving on committees, and participating in advising, policy-making and administrative activities.
- Serve as role models for students, fellows, staff and colleagues with regard to integrity, fairness, collegiality, and civility.

Perform service that advances and enhances the discipline of biochemistry and molecular biology.

Advocate the benefits of science and the scientific method to society.

- Speak out when ideals of honesty and integrity within the academic workplace are violated.

Student Support

Every applicant will be considered for IPIBS Fellowship support. Support after the first seventeen months is the responsibility of the students Dissertation Advisor. Students are also encouraged to seek extramural support.

Guidance for the Student

The Director of the Biochemistry and Molecular Biology Graduate Program will serve as the first year advisor to all incoming graduate students until a Dissertation Advisor is selected. During the first year all students will meet with all available faculty to discuss research projects. After completion of lab rotations and before beginning the second year, the student will select a preceptor, subject to the approval of the Graduate Executive Committee and the Chairman.

After a preceptor is approved, the preceptor must initial the student's registration form each semester and the Director of the Biochemistry and Molecular Biology Graduate Program must sign it.

Drop/add of courses must be approved by the student's advisor and the Director of the Biochemistry and Molecular Biology Graduate Program in consultation with the instructor.

At the end of the first year, a Dissertation Committee will be formed which will serve as the Reading Committee and Examining Committee. This Committee will consist of the preceptor, three other faculty of the Biochemistry and Molecular Biology Department (at least three of the Committee members must be primary faculty in the Biochemistry and Molecular Biology Department), and one member outside of the Department, and must be approved by the Graduate Executive Committee.

Each student must meet regularly with his/her Dissertation Committee. There must be at least one formal meeting per year. This meeting may occur immediately after the student presents his or her annual research conference. After each meeting, the advisor will complete the "Student Meeting Form" and provide copies to the Committee members, the student and the Director of the Biochemistry and Molecular Biology Graduate Program. If deficiencies are identified at the annual meeting, a second meeting of the student and committee will be held that year to determine whether the student has remediated the deficiencies. The first formal meeting of a Ph.D. student with the committee will probably be to present the Preliminary Proposal.

Students who do not have at least one committee meeting per year (every 12 months) will be given an incomplete in Research. This will become an F if the deficiency is not made up within one semester.

Program Admission Procedure

Criteria and Mechanism for Selection

In addition to the Graduate School requirements the following criteria will be used as the basis for formal acceptance of students to the Ph.D. program in Biochemistry and Molecular Biology. Acceptance of each student requires approval unanimously by the Graduate Executive Committee or by a majority of the Graduate Committee.

1. Transcript of course work. A two-semester course in organic chemistry is required (see D1).
2. Grade point average: The Department requires an overall 3.0 grade point average (4.0 system) with an average of 3.0 in science courses.
3. The Graduate Record Examination general test.
4. At least two letters of recommendation, preferably from faculty in biology and/or chemistry.
5. A personal interview with members of the Biochemistry and Molecular Biology Department is encouraged for all applicants.

Student Support

Every applicant will be considered for IPIBS Fellowship support. Support after the first seventeen months is the responsibility of the student's Dissertation Advisor. Students are also encouraged to seek extramural support.

Guidance for the Student

The Director of the Biochemistry and Molecular Biology Graduate Program will serve as the first year advisor to all incoming graduate students until a Dissertation Advisor is selected. During the first year all students will meet with all available faculty to discuss research projects. After completion of lab rotations and before beginning the second year, the stu-

dent will select a preceptor, subject to the approval of the Graduate Executive Committee and the Chairman.

After a preceptor is approved, the preceptor must initial the student's registration form each semester and the Director of the Biochemistry and Molecular Biology Graduate Program must sign it.

Drop/add of courses must be approved by the student's advisor and the Director of the Biochemistry and Molecular Biology Graduate Program in consultation with the instructor.

At the end of the first year, a Dissertation Committee will be formed which will serve as the Reading Committee and Examining Committee. This Committee will consist of the preceptor, three other graduate faculty of the Biochemistry and Molecular Biology Department (at least three of the Committee members must be primary faculty in the Biochemistry and Molecular Biology Department), and one member outside of the Department, and must be approved by the Graduate Executive Committee.

Each student must meet regularly with his/her Dissertation Committee. There must be at least one formal meeting per year. This meeting may occur immediately after the student presents his or her annual research conference. After each meeting, the advisor will complete the "Student Meeting Form" and provide copies to the Committee members, the student and the Director of the Biochemistry and Molecular Biology Graduate Program. If deficiencies are identified at the annual meeting, a second meeting of the student and committee will be held that year to determine whether the student has remediated the deficiencies. The first formal meeting of a Ph.D. student with the committee will probably be to present the Preliminary Proposal.

Students who do not have at least one committee meeting per year (every 12 months) will be given an incomplete in Research. This will become an F if the deficiency is not made up within one semester.

Course Requirements for the Ph.D. Degree in Biochemistry and Molecular Biology

1. Students entering the Ph.D. program should have taken two semesters of organic chemistry and earned satisfactory grades. Students with unsatisfactory grades in organic chemistry have the option of taking and passing the ACS examination with a minimum score of the 40th percentile in the area of deficiency or taking a remedial undergraduate course(s) or appropriate graduate course(s) in the area of deficiency and earning a B or better.
2. The courses required for the Ph.D. in Biochemistry and Molecular Biology, are the core IPIBS requirement (shown in bold below), and a minimum of 24 credit hours of classroom instruction (not including research, rotations or seminars), of which 17 credit hours must be in BIOC courses. The Biochemistry courses that can be used to satisfy these requirements are listed below.

Fall Semester:

- Biochemistry I 545/645 (3/4)
- Biochemical & Mol Biol Methods 611 (3) (IPIBS requires a departmental Methods course)
- Molecular Biology 668 (4)
- Advanced Eukaryotic Genetics 641 (4)
- Biochemistry of Cancer 675 (2) (offered in alternate years)
- Molecular Endocrinology 660 (2)
- Special Topics in Biochemistry 603 (1-3)

Spring Semester:

- Cell Biology 667 (3)
- Biochemistry II 547/647 (3/4) (fulfills the IPIBS elective requirement)
- Protein Structure and Function 670 (4)
- Special Topics in Biochemistry 603 (1-3)

The selection of courses to complete the credit requirements should be made in consultation with the students dissertation committee and require approval of the Graduate Executive Committee. Course descriptions may be found in the current edition of the Graduate Catalog.

In addition, Biochemistry 606 (Seminar) is required each year of residence. In the first year, students will receive credit for attendance and participation. After the first year, students will present seminars, with a total of three seminars presentations required. The first two seminars will be graded. *Only one seminar may be on a topic related to the student's research.* Attendance is required at all Biochemistry Seminars and Research Conferences.

3. All classes should be taken before the end of the students second year and must be taken before the student enters candidacy. For students with previous graduate training, documented graduate level courses may be accepted to fulfill credit requirements. This requires approval by the Graduate Executive Committee when the student is admitted.

4. All Ph.D. students are required to assist in teaching 8-10 hours per week for one semester during their 2nd or 3rd years. The 2nd year is preferable. This requirement is normally met by serving as a teaching assistant in Biochemistry I or II.

5. Students are expected to maintain B (3.0) averages in their course work. A student who fails to maintain a B average will be placed on academic probation and will be subject to dismissal from the program.

Examinations and Proposal

(If a mentor ascertains that the following schedule is not in the best interest of a student, the mentor may petition, in writing, the Graduate Executive Committee for a change in the schedule.)

Ph.D. qualifying exam (Exam I). The purpose of this exam is to evaluate the student's ability to interpret literature, independently develop a research plan, integrate material from the graduate curriculum, write clearly, organize a proposal, and

orally defend their ideas. It will help the student to develop the tools necessary for preparation and defense of their doctoral dissertations. Successful completion of Exam I will be a strong indicator for successful completion of the Ph.D. Details about the format for exam I can be found in appendix A.

Exam I will usually be taken in May - June of the second year in the Ph.D. program, a minimum of 4 weeks after completing course work and/or teaching in Graduate Biochemistry. Students must have completed their core graduate courses, have a cumulative GPA of 3.0 or greater, and selected a mentor approved by the Graduate Executive Committee to be eligible for Exam I. Successful completion of this exam will allow the student to enter Ph.D. candidacy.

Preliminary Dissertation Proposal. The purpose of this preliminary proposal is to allow the Dissertation Committee to assess whether the proposed project is appropriate for Ph.D. research and whether the student is prepared to develop a Written Proposal for Oral Examination. The student will meet with his/her Ph.D. Committee to discuss the student's academic progress, get advice on electives and discuss the research project *during the third quarter of the second year.* The student will provide the Committee with a 1 to 2-page summary of research proposed for the Ph.D. dissertation one week prior to this meeting. The write-up may be in outline format and must include a hypothesis, a list of the specific aims, the general methodology that will be used, and the experiments that will be performed for the next few months in preparation of the formal research proposal. The candidate will give a 15-30 minute oral presentation to the Committee emphasizing the hypothesis, specific aims and feasibility of the proposed project and demonstrating knowledge of the literature. The completed "Student Meeting Form" will indicate whether or not an additional meeting is required.

Written Dissertation Proposal and Oral Examination (Exam II). - The purpose of this written proposal is for the Dissertation Committee to examine the student's ability to develop and defend a research project. A formal written proposal of the student's dissertation work and oral defense should be completed *before December of the student's third year.* The proposal, typed single-spaced, will not exceed one page for hypothesis and specific aims, two pages for background (significance), three pages of preliminary results, and three pages for proposed experimental plans. The proposal will also include a listing of major equipment required, a proposed time frame for the conduct of experiments, and literature citations. See instructions for NIH proposal Guidelines (http://grants.nih.gov/grants/funding/phs398/section_1.html#b_general). The student is responsible for the literature search, specific experimental design and preparation of the proposal. Students may format the dissertation proposal in the form of a thesis, and submit it to the graduate school for an M.S. degree. In this case the oral presentation and examination will serve as the M.S. thesis defense. Committee members must receive the proposal two weeks prior to the date of the oral examination. During the oral examination, the student will present a formal research conference open to the Department.

This will be followed by an oral defense with the student's Committee. The dissertation advisor should coordinate the proposal process and officiate at this examination, but should not dominate the questioning. A written report stating the outcome of the examination and signed by each examiner will become a part of the student's record. Failure to perform at an adequate level will result in the student being paced in Master's degree candidacy and may result in their being dismissed from the graduate program.

Dissertation and Defense

Ph.D. students may choose between a traditional dissertation format or one consisting of manuscript(s) ready for submission for publication in a refereed journal. In addition to the manuscript(s), the latter format must contain an introduction that includes a literature review and an overall discussion tying the manuscripts together. The option of a traditional dissertation as opposed to the manuscript form needs the approval of the student's advisor. The number of manuscripts required and their quality will be left to the judgment of the Dissertation Committee. The Dissertation Committee must receive a completed copy of the dissertation at least two weeks prior to the date scheduled for the defense and shall complete the review of the dissertation at least one week before the oral defense. Consult the current "Standards for the Preparation of Theses and Dissertations," published by the Graduate School. A copy is available in the Biochemistry and Molecular Biology Office.

Change in Guidelines

When requirements change, a student has the option of satisfying either the requirements in effect when he/she entered the program or the current requirements.

Master of Science in Biochemistry and Molecular Biology

Major Code: BIOC

Degree Code: MS

Unit: GM

Department Webpage: <http://biochemistry.louisville.edu/>

General Information

As teachers and scientists, the faculty of the Department of Biochemistry and Molecular Biology subscribe to the following missions:

- Provide up-to-date and high quality classroom and laboratory instruction in the discipline of biochemistry and molecular biology to students at the University.
- Conduct and publish research or other scholarship in areas that advance knowledge within the discipline, contribute to improving the human condition, or contribute to teaching.

- Train students and post-doctoral fellows in biochemical research.
- Encourage and enhance the professional development of faculty colleagues, especially junior faculty.
- Serve as a resource for information on biochemistry and molecular biology for the University and the community at large.
- Contribute to the orderly and smooth functioning of the University by serving on committees, and participating in advising, policy-making and administrative activities.
- Serve as role models for students, fellows, staff and colleagues with regard to integrity, fairness, collegiality, and civility.
- Perform service that advances and enhances the discipline of biochemistry and molecular biology.
- Advocate the benefits of science and the scientific method to society.
- Speak out when ideals of honesty and integrity within the academic workplace are violated.

Procedure for Application

To be considered for admission into the Biochemistry and Molecular Biology graduate program, we will need the following completed documents:

1. Completed application form (application fee applies)
2. A copy of your official transcripts
3. Two letters of recommendation
4. Your official GRE and TOEFL scores

These completed documents should be returned to the Office of Admissions.

Curriculum Requirements

Fall Semester		
Course #	Title	Hours
603 03	Gene Networks Modeling	3
603 04	Techniques in Biomolecular Interaction	2
606	Seminar	1
611	Biochemical Molecular Methods	3
613	Biochemistry Lab (Rotation)	2 - 4
619	Research	1 - 15
641	Eukaryotic Genetics	4
645	Biochemistry I	4
668	Molecular Biology	4

Spring Semester		
Course #	Title	Hours
603 01	Special Topics	
603 02	Post-Transcriptional Control of Gene Expression in Eukaryotes	1 - 2
606	Biochemistry Seminar	1
613	Biochemistry Lab (Rotation)	2 - 4
619	Research	1 - 15
647	Biochemistry II	4
670	Protein Structure & Function	2
661/ PHARM 661	Molecular Methods of Toxicology	1.5

Departmental Faculty

Professors

Kenneth S. Ramos, *Chair*
 Mark D. Brennan
 William L. Dean
 Richard C. Feldhoff
 Robert D. Gray
 Nancy C. Martin
 Russell A. Prough
 Eugenia Wang
 James L. Wittliff

Associate Professors

Barbara J. Clark
 Jaydev N. Dholakia
 Steven R. Ellis
 Pamela W. Feldhoff
 Thomas E. Geoghegan
 Ronald G. Gregg
 Carolyn M. Klinge
 Shin Murakami
 Thomas J. Wheeler

Assistant Professors

Vilius Stribinskis
 Stephanie J Webb

Joint Faculty

Paula J. Bates, *Medicine*
 Aruni Bhatnagar, *Medicine*
 Douglas Borchman, *Ophthalmology & Visual Sciences*
 Jason Chesney, *Medicine*
 Douglas S. Darling, *Biological and Biophysical Sciences*

H. Leighton Grimes, *Surgery*
 Marcia M. Jumblatt, *Ophthalmology & Visual Sciences*
 Sham Kakar, *Medicine*
 Jon B. Klein, *Medicine*
 Andrew N. Lane, *Medicine*
 Herbert A. Lassiter, *Pediatrics*
 Kenneth R. McLeish, *Medicine*
 Donald H. Miller, *Medicine*
 Director of James Graham Brown Cancer Center
 Robert A. Mitchell, *Medicine*
 C.V. Rao, *Obstetrics/Gynecology*
 John O. Trent, *Medicine*
 Roland Valdes Jr., *Pathology*
 Brian W. Wattenberg, *Medicine*
 Stephen J. Winters, *Medicine and Endocrinology*
 William W. Young, Jr., *Biological and Biophysical Sciences*

Master of Science in Communicative Disorders

Major Code: CMDS
 Degree Code: MS
 Unit: GM
 Department Webpage: <http://www.louisville.edu/medschool/surgery/com-disorders>

Program Information

The Graduate School offers a Master of Science in Communicative Disorders for speech language pathology majors, and the Doctor of Audiology degree for Audiology majors. Both programs are administered through the Division of Communicative Disorders, Department of Surgery, School of Medicine. Separate application and acceptance is required for admission to each degree program. Acceptance into one program does not guarantee admission to the other program.

The program leading to a Master of Science degree for Speech Pathology majors is a full time five-semester sequence beginning each year in the fall semester. The program leading to the Doctor of Audiology degree is a full-time, four-year degree program. The final year of the program may be spent at an external location.

The Council on Academic Accreditation (CAA) of the American Speech Language Hearing Association (ASHA) accredits the Speech Language Pathology Program and the Audiology Program. Graduating students will be eligible to apply for the Certificate of Clinical Competence by ASHA if all requirements are fulfilled. Students may also be eligible for Kentucky State Teaching Certification in speech language pathology. The Teacher Certification Program by which speech pathology students prepare for school therapy positions is certified by the National Council for Accreditation for Teacher Education. Additional coursework may be required to be eligible for ASHA or teaching certification.

The program operates its own teaching clinics, including the WHAS Crusade for Children Audiology and Speech Pathology Center, the University of Louisville Hospital, faculty practice locations, and Kosair Children's Hospital. In addition the program has cooperative arrangements with more than thirty schools, agencies, hospitals, and practice groups in the Kentuckiana region.

Admission Procedures

Speech Pathology

Applicants should have a cumulative undergraduate grade point average of at least 3.0 on a 4.0 scale and combined Verbal and Quantitative scores on the Graduate Record Examination of at least 900. At least three letters of recommendation should accompany the application. A formal interview may be required. The applicant should read and meet the general requirements for admission to the Graduate School.

Audiology

Applicants should have a cumulative undergraduate grade point average of at least 3.2 on a 4.0 scale and combined Verbal and Quantitative scores on the Graduate Record Examination of at least 1000. Three letters of recommendation should accompany the application and a formal interview is required.

Degree Requirements

Candidates for the Master of Science degree in speech pathology must complete at least 52 credit hours at the graduate level, exclusive of credits related to the completion of a (optional) master's thesis, courses required to complete ASHA certification requirements, and/or course work related to Kentucky State Teacher Certification. Candidates for the Doctor of Audiology degree must complete the prescribed curriculum and experiences as outlined in the program of study. Courses necessary to complete ASHA certification requirements are in addition to the prescribed curriculum.

Pass/Fail Option

In general, students in Speech Pathology or Audiology may not choose the pass/fail option. Certain courses may be offered with this option at the discretion of the faculty.

Comprehensive Examinations

Students in Speech Language Pathology will take an eight-hour written comprehensive examination followed by a one and one-half hour oral comprehensive examination during their last semester of study. The completion of a master's thesis is encouraged, but is optional. Thesis students will take at least one statistics course above the introductory level. Thesis students will take a comprehensive oral examination that will focus primarily, but not exclusively, on the thesis work itself.

These examinations must be completed at least five weeks prior to the completion of the student's graduate program. The

student is responsible for becoming familiar with the consequences of failure on the written or oral examinations. This information is available at the program office.

Clinical Practicum

The American Speech Language Hearing Association requires a minimum of 375 clock hours of supervised clinical practicum in speech pathology or audiology to be eligible for certification. Twenty clock hours must be in the student's minor area and two hundred sixty clock hours must be at the graduate level. (Ten of the 260 hours are graduate observation and 250 are clinical clock hours.) In Audiology, students will earn between 2500 and 3000 experiential hours over the four years of the program. The student may spend the final year of the program at a clinical site outside the Louisville area.

Certain prerequisites and standards apply to the clinical practicum component of the program, including minimum course work requirements, mandatory readings, observations, case report formats, and grading criteria. This information is available in the program office and it is the student's responsibility to become acquainted with these requirements prior to enrolling in clinical practicum.

Falling below a 3.0 average in practicum for two consecutive semesters will result in dismissal from the program. Practicum assignments are made at the faculty's discretion and with the service needs of the clinic in mind. All practicum work done outside of the main program must be given prior approval by the section director.

For more detailed information regarding the Graduate Program in Communicative Disorders, please write: Program Chair, Graduate Program in Communicative Disorders, Myers Hall, University of Louisville, Louisville, Kentucky 40292 or telephone (502) 852-5274.

Departmental Faculty

Professors

David R. Cunningham

Barbara M. Baker

Associate Professors

Ian M. Windmill

Jill Preminger

Assistant Professors

Pat B. Blackwell

Doctor of Philosophy in Microbiology and Immunology

Major Code: MBIO

Degree Code: PHD

Unit: GM

Department Webpage: <http://www.louisville.edu/medschool/microbiology/>

General Information

Program Admission Procedure

The Department of Microbiology and Immunology, in the School of Medicine, offers programs of study leading to the degrees of Doctor of Philosophy and Master of Science. For admission to the Ph.D. or M.S. program, the applicant must have attained the B.S or B.A. degree with a minimum grade-point average of 3.0 (on a 4.0 point scale). In addition to the completed application form and \$50 application fee, the scores of the General Test Section of the Graduate Record Examination and the TOEFL (where applicable), official transcripts of all undergraduate and graduate course work, two letters of recommendation, and a short biographical sketch are required. The applicant must meet the other general requirements of the Graduate School as outlined in the General Information section of this catalog. Applicants are encouraged to apply early as space is limited. Applications are reviewed on a rolling basis beginning February 1st.

The applicant is expected to have completed the following: One year of introductory biology, one year of organic chemistry, one year of physics, one semester (or equivalent) of introductory calculus, and one semester of biochemistry.

Prospective students may be invited for a personal interview with members of the department.

Program Curriculum Requirements

Required Courses:

MBIO 601
Introduction to Infectious Diseases(2 credit hours)
MBIO 602
Introductory Immunology.....(2 credit hours)
MBIO 667
Cell Biology..... (3 credit hours)
BIOC 645
Biochemistry I.....(4 credit hours)
MBIO 606
Seminar/Journal Club(2 credit hours)
MBIO 600
Laboratory Rotations in Microbiology and
Immunology.....(1-2 credit hours)
MBIO 690

Research Methods in Microbiology and
Immunology(3 credit hours)
MBIO 619
Research(1-12 credit hours)
Select three courses from the list of suggested electives
(at least 1 elective must be offered in the Department MBIO):
MBIO 658
Cellular and Molecular Immunology(3 credit hours)
MBIO 670
Molecular Virology(3 credit hours)
MBIO 680
Genetics of Infectious Disease(2 credit hours)
MBIO 685
Microbial Physiology(3 credit hours)
MBIO 687
Microbial Pathogenesis(2 credit hours)
BIOC 668
Molecular Biology(4 credit hours)
BIOC 675
Biochemistry of Cancer(2 credit hours)
CAMR 620
Methods in Cellular Fluorescence(3 credit hours)
BIOC 647
Biochemistry II.....(4 credit hours)
BIOL 617
Advanced Molecular Biology(4 credit hours)
MBIO 618-01
Topics in Advanced Microbiology.....(1 credit hour)
"Recombinant viruses & viral vectors" (*will need another 1
credit course to count toward elective*)
MBIO 618 -02
Topics in Advanced Microbiology.....(1 credit hour)
"Structure & Replication of Human viruses" (*will need
another 1 credit course to count toward elective*)

** Students enrolled in the M.D./Ph.D. Joint Degree Program who have completed step I of NBME will have satisfied all of the course requirements except seminar and research. They will be required to satisfactorily complete the Qualifying Exam and successfully defend a dissertation research project, in addition to attending all seminars.

Program of Study

Upon successful completion of the first two semesters of required course work, maintaining a minimum 3.0 GPA, and upon the recommendation of the Advisor or Chair, the student may take the Ph.D. Qualifying Examination. The Qualifying Examination will consist of a written research proposal outside of his/her area of primary research, and oral defense of the project. Three to five faculty with expertise in the area of the proposal will be selected by the Chair to serve as the Examining Committee. The student may enter degree candidacy upon receipt of satisfactory judgment from the Examining Committee, and successful completion of the final semester of course-work.

Selection of a Research Advisor, Dissertation Committee and Research Proposal:

Selection of the Research Advisor and specific research area is one of the most important decisions of the student's entire graduate training program, and is a joint decision by the student and faculty member. Students must select a Research Advisor for their dissertation research by Dec. 20th of their second semester. Selection of the Research Advisor and formation of the Dissertation Committee must be approved by the Graduate School Dean. If the potential Advisor has a primary appointment in another department, the potential Advisor must agree, in writing, to provide stipend and tuition from his/her research funds. Upon approval of the Research Advisor, the student will formally decide upon a dissertation research project. The student, Research Advisor, and Departmental Chairperson will form a Dissertation Committee with five (5) graduate faculty members. The Committee will be composed of the Advisor, three faculty members of the Department of Microbiology and Immunology, and one additional graduate faculty member from another department. If the Advisor does not have a primary appointment in the Department of Microbiology and Immunology, one of the three other departmental members with a primary appointment in the department must serve as Co-Advisor. The Chairman of the Department may serve as an ex-officio member of the Committee. The student will submit a written proposal cosigned by the Dissertation Advisor to the Dissertation Committee on the planned Ph.D. dissertation topic by April 1st, at the end of the first year in the program. The proposal should be 5-10 pages long, single-spaced, 12 point type, with no more than 1.25 inch margins. Approval of this dissertation proposal by the Dissertation Committee is the first step toward candidacy status.

The Committee will meet at regularly to evaluate progress of the research. The student will also be required to present a research seminar to the Department annually on this progress. When the dissertation research is completed, the Committee will conduct the final oral examination in accordance with the guidelines in the General Information section of this catalog.

For more information go to the department website at:

www.louisville.edu/medschool/microbiology/

Master of Science in Microbiology and Immunology

Major Code: MBIO

Degree Code: MS

Unit: GM

Department Webpage: <http://www.louisville.edu/medschool/microbiology/>

General Information

Program Admission Procedure

The Department of Microbiology and Immunology, in the School of Medicine, offers programs of study leading to the degrees of Doctor of Philosophy and Master of Science. For admission to the Ph.D. or M.S. program, the applicant must have attained the B.S or B.A. degree with a minimum grade-point average of 3.0 (on a 4.0 point scale). In addition to the completed application form and \$50 application fee, the scores of the General Test Section of the Graduate Record Examination and the TOEFL (where applicable), official transcripts of all undergraduate and graduate course work, two letters of recommendation, and a short biographical sketch are required. The applicant must meet the other general requirements of the Graduate School as outlined in the General Information section of this catalog. Applicants are encouraged to apply early as space is limited. Applications are reviewed on a rolling basis beginning February 1st.

The applicant is expected to have completed the following: One year of introductory biology, one year of organic chemistry, one year of physics, one semester (or equivalent) of introductory calculus, and one semester of biochemistry.

Prospective students may be invited for a personal interview with members of the department.

Program Curriculum Requirements

Required Courses:

BIOC 645
Graduate Biochemistry I.....(4 credit hours)
either
-- MBIO 601
Introduction to Infectious Diseases(2 credit hours)
or
-- MBIO 602
Introductory Immunology(2 credit hours)
MBIO 606
Seminar/Journal Club(2 credit hours)
MBIO 690
Research Methods in Microbiology and Immunology
.....(3 credit hours)
MBIO 619
Research(1-12 credit hours)
MBIO 620
Thesis (optional).....(1-6 credit hours)
Select two from the following list of suggested electives:
MBIO 658
Cellular and Molecular Immunology.....(3 credit hours)
MBIO 667
Cell Biology.....(3 credit hours)
MBIO 670
Molecular Virology(3 credit hours)
MBIO 680
Genetics of Infectious Disease.....(2 credit hours)
MBIO 685

Microbial Physiology.....(3 credit hours)
MBIO 687, Microbial Pathogenesis.....(2 credit hours)
MBIO 618 -01
Topics in Advanced Microbiology.....(1 credit hour)
“Recombinant viruses & viral vectors” (<i>will need another 1 credit course to count toward elective</i>)
MBIO 618 -02
Topics in Advanced Microbiology.....(1 credit hour)
“Structure & Replication of Human viruses” (<i>will need another 1 credit course to count toward elective</i>)
Minimum Total30 credit hours

If the student has satisfactorily completed the required courses and total credit hour requirements with an overall and program GPA of 3.0, then the student may register as an M.S. candidate.

Program of Study

Students admitted to the M.S. Degree Program should select a Research Advisor, from a Thesis Committee, and decide upon an area of research in the first semester. The student and Advisor should form a Committee of three (3), composed of the Advisor, one other graduate faculty member of the Department, and a third member with graduate faculty status in another department. The second Committee member will serve as Co-Advisor, if the Advisor does not have primary appointment in the Department of Microbiology and Immunology. The Department Chair may serve as an *ex officio* member of the Thesis Committees.

Students in the M.S. Program are required to submit and defend a thesis. The thesis must conform to the Graduate School's Guidelines. Students, with the consent of the Departmental Graduate Faculty Committee, may elect to substitute a written research proposal instead of a traditional thesis, based on laboratory research performed by the student, describing successive research to be pursued. The final oral defense will be preceded by a research seminar open to everyone. The oral examination will be administered by the Thesis Committee, and will be open to any other interested graduate faculty members. Evaluation of student competence and thesis acceptability, together with departmental recommendations for graduation will be forwarded to the Dean of the Graduate School.

Departmental Faculty

Professors

Robert D. Stout, *Chair*
 Haval Shirwan, *Director*, Molecular Immunomodulation Program, Institute for Cellular Therapeutics
 Uldis N. Streips
 Jill Suttles
 Yousef Abu Kwaik, *Bumgardner Endowed Professor*

Associate Professors

Haribabu Bodduluri
 Lawrence A. Hunt
 Richard D. Miller
 Michele Kosiewicz

Assistant Professors

Pascale Alard
 Reynaldo Carabeo
 Nejat K. Egilmez
 Menq-Jer Lee
 Thomas C. Mitchell, *Institute of Cellular Therapeutics*
 Barnstable-Brown Professor in Diabetes Research
 Esma Yolcu, *Institute of Cellular Therapeutics*

Joint Faculty

Donald R. Demuth, *Periodontal, Endodontal & Dental Hygiene*
 G. Rafael Fernandez-Botran, *Pathology And Laboratory Medicine*
 George Hajishengallis, *University Scholar, Periodontics & Endodontics*
 Henry Kaplan, *Chairman, Ophthalmology & Visual Sciences*
 Denis Kinane, *Delta Endowed Chair Of Periodontology*
 Associate Dean for Research
 Michael Martin, *Periodontics, Endodontics & Dental Hygiene*
 Mariuz Ratajczak, *Medicine, Director Of Stem Cell Biology Program*
 Hui Shao, *Ophthalmology & Visual Sciences*
 Robert H. Staat, *Biological and Biophysical Sciences*
 Deming Sun, *Ophthalmology & Visual Sciences*

Associate Faculty

John Barker, *Director, Plastic/Hand Surgery Research Acting CEO, Metacyte Business Lab*
 William G. Cheadle, *Surgery*
 Volker Enzmann, *Ophthalmology & Visual Sciences*
 Paul W. Ewald, *Biology*
 Awdhesh Kalia, *Medicine*
 Jon B. Klein, *Medicine*
 Gary S. Marshall, *Pediatrics*
 Kosair Charities Pediatric Center
 Kenneth McLeisch, *Medicine*
 James W. Snyder, *Pathology*
 James T. Summersgill, *Div. of Infectious Diseases, Medicine*
 Samuel R. Wellhausen, *Pathology*
 Lung T. Yam, *Medicine*
 Jun Yan, *Medicine*
 Heshan Sam Zhou, *Medicine*

Adjunct Faculty

Karen Cost, *Director, Clinical Immunology Laboratory*
 Anthony J. Janckila, *Technical Director, Special Hematology Laboratory, Department of Veteran's Affairs Medical Center*
 Diane J. Pidwell-Brown, *Pathology*

Gerald Sonnenfeld, *Vice President for Research, Binghamton University*

Emeritus Faculty

Robert D. Higginbotham

Pinghui Liu

Doctor of Philosophy in Pharmacology and Toxicology

Major Code: PHTX

Degree Code: PHD

Unit: GM

Department Webpage: <http://www.louisville.edu/medschool/pharmacology>

General Information

The Department of Pharmacology & Toxicology is committed to academic excellence and to the attainment of regional, national, and international recognition for the quality of its educational, research, and service activities. Guided by the University of Louisville Challenge for Excellence to become a preeminent metropolitan research university, the Department Strategic Plan will focus on accomplishment of five broad objectives:

- Provide instruction in pharmacology and toxicology of the highest quality for the education and preparation of medical, dental, nursing, and other health care professional students. Emphasis will be placed on the fundamental principles necessary for life-long learning and the essential knowledge required for rational, effective, and safe use of drug therapy.
- Advance biomedical knowledge through active contribution to high quality research and other scholarly activities, particularly in pharmacology and toxicology and other areas of focus within the University of Louisville Challenge for Excellence.
- Provide high quality research and educational experiences in pharmacology and toxicology for the education and training of future biomedical scientists who can provide and advance biomedical education, research, and service.
- Provide instruction of the highest quality in pharmacology and toxicology that is appropriate for students at the undergraduate, graduate, and postgraduate levels.
- Provide high quality service to the School of Medicine, the Health Sciences Center, the University, the people of Louisville and the surrounding region, the Commonwealth of Kentucky, professional organizations, the nation, and the world.

Goals of the Program

The Department of Pharmacology and Toxicology is dedicated to advancing biomedical knowledge through active contribution to high quality research in pharmacology and toxicology and to providing high quality research and educational experiences for the education and training of future biomedical scientists who advance biomedical education, research, and service.

Student Financial Support

Students accepted into the Ph.D. program will be considered for financial aid; most students enrolled currently receive an annual stipend of \$20,000. In addition, student health insurance and tuition/fees costs are paid. The Department houses a NIEHS Predoctoral Training Program in Environmental Health Sciences which provides stipend support for selected students. Since all Ph.D. students and candidates are considered to be full-time students, they generally are not permitted to seek outside employment while enrolled in the doctoral program. In cases where financial aid is limited and additional support is essential, students needing outside employment must apply in writing for departmental faculty approval. The faculty must also approve any change in employment, as well as approving continued outside employment on an annual basis.

Program Admission Procedure

For the Department of Pharmacology and Toxicology complete guidelines are given below. WWW links can be found at: http://www.louisville.edu/~wmpier01/info_pros_grad.htm

1. Application forms. All candidates for admission to graduate programs at the University of Louisville must complete the application form found at <http://admissions.louisville.edu/gapp/gapp.html> This may be completed online or may be submitted via mail to:

Office of Graduate Admissions
Suite 105, Houchens Bldg
University of Louisville
Louisville, KY 40292
United States of America

Applications are received at any time for starting dates of approximately August 1. All credentials and/or communications should be submitted to the Office of Graduate Admissions and should contain the student's full name and Social Security Number or UofL-issued Student ID. Lack of Social Security Number may cause processing to be delayed. Applications received by January 1 are assured of full consideration for that year. Admission on a conditional basis is a possibility in rare, special cases, even though application materials are incomplete. Please contact the department for additional information.

2. Application Fee. A \$50.00 US currency non-refundable application fee is required with the application form. An appli-

cation will not be forwarded to the department until this fee is paid. A check or money order should be made payable to the "University of Louisville."

3. Transcripts. Applicants for admission to a degree program must submit an official transcript from each college attended. All University of Louisville transcripts will automatically be submitted with completion of an application. All applications are considered on an individual basis. Normally, a successful applicant will have an undergraduate GPA of 3.00 or higher and will have successfully completed sufficient coursework in basic biology, chemistry and mathematics.

4. Test Scores. Applicants normally must take the general section of the Graduate Record Examination (GRE). There is no absolute cutoff score for acceptance. Each case is decided on the totality of its merits. At the discretion of the department, MCAT or other entrance examinations scores may be accepted in place of the GRE. Information can be obtained from:

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NOTE: GRE Institution Code is R1838-University of Louisville. The GRE major codes are 0216 – Pharmacology or 0219 – Toxicology.

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William M. Pierce Jr., Ph.D.
Vice Chair for Graduate Education
Department of Pharmacology and Toxicology
School of Medicine
University of Louisville
Louisville, KY 40292
United States of America

6. English Proficiency All applicants *for whom English is a second language* must also submit official TOEFL scores of 213 or higher on the computer-based test or 550 or higher on the paper-based test for verification of English proficiency. Students holding a bachelor's or advanced degree from an accredited institution in the United States are exempt from this requirement. Information concerning the TOEFL exam can be obtained from: University Testing Center, or Test of English as a Foreign Language PO Box 6151 Princeton, NJ 08541 USA or <http://www.toefl.org> The institutional code of UofL for TOEFL is 1838. The TOEFL department code is 30 (other biological sciences.)

7. Personal Interview Whenever possible, a personal interview, either in person or via telephone will be held before final offer and acceptance of a position in the Ph.D. program.

8. Letters of Recommendation Two letters of recommendation from persons familiar with the applicant's academic work are required. This can be in the form of a letter or may be done using the recommendation form found at <http://admissions.louisville.edu/gapp/recommendation.html> .

9. International Student Applicants In addition to satisfying the appropriate credential requirements, applicants may be required to provide the following documents.

- Applicants who attended college outside the US must submit verbatim notarized English translations of all academic records and credentials.
- If on a Visa that requires an I-20 or IAP-66, the applicant is required to complete an International Financial Supplement Form and submit appropriate financial documentation.
- A cost estimate is available.

10. Financial Aid All applicants to the Ph.D. program of the Department of Pharmacology and Toxicology are automatically considered for financial aid upon admission. Typically, such aid consists of a stipend, tuition remission and a health insurance benefit. The Department provides no funds for such support of Masters' students.

11. Residency Policy Residency status for students is determined in the Office of Graduate Admissions. The status is determined according to the policy on classification of students for fee assessment purposes at state-supported institutions of higher education. Except as provided in the guidelines, it is presumed that a resident has remained in the state in a non-student status for the twelve months immediately preceding the last date for enrollment in the institution.

The domicile of an unemancipated person, as defined in the guidelines, is that of his/her parent. The domicile of a married person is determined by the provisions of the guidelines independent of the residence of the spouse. Copies of the guidelines and appropriate forms for requesting change of residence classification may be obtained from the Office of Student Services.

Indiana Tuition Reciprocity: The University of Louisville is participating in an Indiana Tuition Reciprocity Program for residents of Clark, Crawford, Floyd, Harrison or Scott Counties who have been admitted directly into an approved graduate program. Eligible participants are required to notify the Admissions Office prior to their first enrollment and the Registrar's Office after their first enrollment of any changes in enrollment status. [e.g. if they no longer live in one of the eligible counties, or are no longer in an eligible program.] The University reserves the right to further investigate and require documentation of eligibility for tuition reciprocity.

For Military Personnel: If an applicant, spouse or parent (if dependent) is currently stationed in Kentucky on military active duty for one or more years, please attach a copy of the military orders, a lease or mortgage showing Kentucky

address and a military dependent identification card if appropriate. If the applicant is a Kentucky resident but has been in the military and has been recently discharged, please send a copy of the military discharge papers (DD-214).

International Students on Immigrant/ Permanent Resident Status: If currently on an immigrant/ permanent resident status, it will be necessary to submit a copy of an immigration/ permanent resident card, both sides, for review of possible residency classification for tuition purposes.

The University of Louisville reserves the right to change programs of study, academic requirements, fees, schedules of courses, the announced academic calendar and deadlines without prior notice.

Useful WWW links can be found at : http://www.louisville.edu/~wmpier01/info_pros_grad.htm

Program Curriculum Requirements

The required coursework for either the Ph.D. in PHTX is shown in the table below:

Course	Title	Credit Hours	Normal Staging	
			Program Year	Semester
665	Research Methods in Pharmacology & Toxicology	3	PY1	Fall
645	Biochemistry I	4	PY1	Fall
605	Systemic Physiology I	3	PY1	Fall
647	Biochemistry II	4	PY1	Spring
606	Systemic Physiology II	3	PY1	Spring
667	Cell Biology	3	PY1	Spring
660	Principles of Drug Action	3	PY1	Summer
668	Molecular Biology	4	PY2	Fall
601	Principles of Medical Pharmacology	7	PY2	Fall

606	Pharmacology & Toxicology Seminar	1	PY2	Fall and Spring semesters (until candidacy)
619	Research in Pharmacology and Toxicology	1-6		See Graduate Director or Mentor
	ELECTIVES			See Graduate Director or Mentor

Academic Policies

The general academic policies of the Graduate School are outlined in the first section of the catalogue. The specific policies of the Department of Pharmacology and Toxicology are listed below.

Laboratory Research and Selection of Advisor

Students in the PHTX M.S. and Ph.D. programs receive training in both the classroom and laboratory. It is most important that students begin work in the laboratory as soon as possible. Immediately before the classroom courses for the first year begin, incoming students attend an orientation program to introduce them to the facilities and policies of the program and school, as well as to the research activities of the faculty.

During the first quarter, students also will meet more formally with those faculty members of the department with whom the student may wish to work. Students will participate in laboratory rotations in these laboratories in order to familiarize themselves with a variety of possible research projects and faculty mentors. Students will receive letter grades for their research efforts and performance every semester prior to becoming a doctoral candidate. Students will participate in at least 2 eight week rotations. During rotations, students are expected to be participating in the activities of the laboratory except for time spent in the classroom.

As soon as possible, but no later than the end of the first year, students must select Graduate Research Advisors. Early selection of research projects and advisors will permit students to spend a maximum amount of time pursuing their research goals and thus shorten the time required for completion of their dissertation research. The selections of the graduate advisors must be approved by the Graduate Committee. Students are expected to begin working diligently in the labora-

tory of their research advisors as soon as the selections are made. Although students normally remain in the laboratories of these advisors for all Ph.D. training, if it is decided by either an individual student or his or her advisor that a change of research advisors is desirable, then the student has the option of selecting a new research advisor with the approval of the Graduate Committee.

Courses

Students will normally complete all of the required courses for graduation during the first 17 months of study. Any changes to this schedule must be approved in advance by the Graduate Committee.

In addition to these required courses, a variety of electives are offered by this and other departments, which may be taken with the permission of the student's research advisor. A Molecular Mechanisms of Toxicology Course (PHTX-661) offered each Spring semester is required for students in the NIEHS Predoctoral Training Program in Environmental Health Sciences. Other students are also encouraged to select this course as an elective.

Seminars and Research Conferences

All students are expected to attend departmental seminars, research conferences and journal clubs and will register for PHTX-606 (Pharmacology Seminar, one hour credit) each semester until candidacy status is attained. Students will also give one presentation per year. Following these presentations, students will be given written evaluations which will be discussed with them by a member of the departmental Seminar Committee. Doctoral candidates will normally have meetings with their Dissertation Committees following their annual seminars in which their accomplishments and progress towards the Ph.D. degree will be discussed. All students are expected to participate actively in the questions and discussion following seminars. Students will receive grades based both on their individual presentations as well as their participation in the other departmental seminars.

Evaluation of Student's Progress toward the M.S. or Ph.D. Degree

At the end of every semester, the progress of each Ph.D. student will be evaluated by the departmental faculty. Ph.D. students are expected to maintain a GPA of at least 3.0, satisfactory research performance, active participation in department activities and seminars, and acceptable performance on the Qualifying Exams (for first and second year students). Students who receive grades of "C" or below in two or more courses will be considered for dismissal. Students must also maintain a satisfactory level of research performance in order to remain in good standing and to retain fellowship of assistantship support.

Qualifying Exams for Ph.D. degree

Ph.D. students will take a series of Qualifying Exams, formulated by the faculty members of the department and administered by the Graduate Committee. Each exam will be designed to assess the ability of students to apply their knowledge to various research situations.

Research Proposal and Research Progress Reports

As part of the doctoral training program, students must complete and submit to their dissertation committees and the departmental faculty a dissertation research proposal in the form of an NIH grant application. This must be an original work of the student, created with the advice of the mentor. A copy will be placed in the departmental office. After faculty and committee members have had at least two weeks to read the student's grant application, the proposal will be presented and defended by the student during a scheduled seminar period. The student's dissertation committee will then conduct an oral examination of the student's understanding and plans, and must give written approval of the proposal prior to advancement to candidacy.

The NIH grant application may be submitted at any time during the second year of study, but must be submitted before April 1 and presented by the end of May unless a written request to delay is made and granted to the student. One hour of Independent Study credit will be given during the Spring semester of the second year for work on grant application, and a grade will be assigned for the quality of the application.

Selection of Ph.D. Dissertation Committee

Once an advisor has been selected and the research project is underway, the advisor in consultation with the student will submit to the Graduate Committee names of at least five faculty members (one of these being the mentor and one from outside the department) willing to serve on the student's dissertation committee. Since this dissertation committee must approve the student's research proposal, the committee should be appointed as soon as possible. Committees must be approved by the Graduate Committee, the Chair of the Department and the Dean of the Graduate School.

Doctoral Candidacy

After successful completion of all required course work, successful completion of the qualifying exams, approval of the Research Proposal, and acceptable performance in the laboratory, a student will become a Doctoral Candidate. The M.S. degree and doctoral candidacy should normally be achieved no later than the summer following the second year. The remaining requirement is to demonstrate to the student's Dissertation Committee his/her ability to plan, conduct, analyze, and present original and independent research.

Each year of candidacy, students will present an update of research progress at a regularly scheduled departmental

seminar. Student Dissertation Committees must provide annual written certification of satisfactory progress toward the Ph.D. Failure to make satisfactory progress towards the Ph.D. degree, documented by unsatisfactory reports from the student's Dissertation Committee, is grounds for dismissal from the program.

Dissertation

The writing and defense of a doctoral dissertation is the final requirement for the Ph.D. degree. Dissertation committee members must have had at least two weeks to read a student's Dissertation before a defense can be scheduled. The dissertation must present data of sufficient quality and quantity so as to convince the dissertation committee that the student possesses the ability to pursue independent and original research. The student must defend the research protocol, results, and conclusions at an oral dissertation defense. To satisfactorily pass the dissertation defense, a student may not receive more than one unfavorable vote from a member of the dissertation committee.

Master of Science in Pharmacology and Toxicology

Major Code: PHTX

Degree Code: MS

Unit: GM

Department Webpage: <http://www.louisville.edu/medschool/pharmacology>

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William M. Pierce Jr., Ph.D.
Vice Chair for Graduate Education
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Courses

Students will normally complete all of the required courses for graduation during the first 17 months of study. Any changes to this schedule must be approved in advance by the Graduate Committee.

In addition to these required courses, a variety of electives are offered by this and other departments, which may be taken with the permission of the student's research advisor. A Molecular Mechanisms of Toxicology Course (PHTX-661) offered each Spring semester is required for students in the NIEHS Predoctoral Training Program in Environmental Health Sciences. Other students are also encouraged to select this course as an elective.

Seminars and Research Conferences

All students are expected to attend departmental seminars, research conferences and journal clubs and will register for PHTX-606 (Pharmacology Seminar, one hour credit) each semester until candidacy status is attained. Students will also give one presentation per year. Following these presentations, students will be given written evaluations which will be discussed with them by a member of the departmental Seminar Committee. Doctoral candidates will normally have meetings with their Dissertation Committees following their annual seminars in which their accomplishments and progress towards the Ph.D. degree will be discussed. All students are expected to participate actively in the questions and discussion following seminars. Students will receive grades based both on their individual presentations as well as their participation in the other departmental seminars.

Evaluation of Student's Progress toward the M.S. or Ph.D. Degree

At the end of every semester, the progress of each Ph.D. student will be evaluated by the departmental faculty. Ph.D. students are expected to maintain a GPA of at least 3.0, satisfactory research performance, active participation in department activities and seminars, and acceptable performance on the Qualifying Exams (for first and second year students). Students who receive grades of "C" or below in two or more courses will be considered for dismissal. Students must also maintain a satisfactory level of research performance in order to remain in good standing and to retain fellowship of assistantship support.

Selection of M.S. Thesis Committee

Once an advisor has been selected and the research project is underway, the advisor in consultation with the student will submit to the Graduate Committee names of at least three faculty members (one of these being the mentor and one from outside the department) willing to serve on the student's thesis committee. Since this thesis committee must approve the student's research proposal, the committee should be appointed as soon as possible. Committees must be approved by the Graduate Committee, the Chair of the Department and the Dean of the Graduate School.

Masters Candidacy

After successful completion of all required coursework, the student will be admitted to Master's candidacy. Once candidacy is achieved, presentation and successful defense of a thesis will be the remaining requirement for the MS degree. Most Ph.D. students will be expected to complete a M.S. on the way to the Ph.D.

Masters Tracks

Two tracks are available to students interested in obtaining the M.S. degree in the Department of Pharmacology and Toxicol-

ogy. These are the M.S.- Laboratory Research Track (Track 1), and the M.S.-Academic Research Track (Track 2).

The M.S.- Laboratory Research Track requires that the student work extensively in a research laboratory under the direction of a faculty Research Advisor throughout the two-years of matriculation. During the summer of the first year, incoming students in this track of the Masters Program will attend an orientation program to introduce them to the various laboratories and research activities of the faculty. During this time, but not later than the end of the Fall semester, each student must choose (or will be assigned) a Research Advisor under whose direction and in whose laboratory the research project will be conducted. Students in Track 1 of the Masters program are expected to begin working diligently in the laboratory of the advisor as soon as the selection is made. Students will register and receive a grade for laboratory research every semester. Students who successfully complete the M.S. degree in the Laboratory Research track could be considered for advanced standing in the Ph.D. program, usually at the level of Doctoral Candidacy, pending submission of an NIH grant proposal and successful completion of a written qualifying examinations.

The M.S.- Academic Research Track, while not requiring extensive laboratory work, requires the student to research an area of pharmacological or toxicological importance under the direction of a faculty advisor. This research must result in the generation of a comprehensive treatise which reviews, critically analyzes and assimilates a body of knowledge into a Masters thesis approved by the student's thesis committee. Students in Track 2 of the Masters program are expected to begin working diligently on this project as soon as they have chosen the faculty advisor and research topic. Students will register and receive a grade for work on their research project every semester. Students who obtain the M.S. degree in the Academic Research track will normally not have attained sufficient laboratory experience to be admitted to advanced standing in the Ph.D. program.

Masters Thesis

The writing and defense of a Masters' thesis is the final requirement for the M.S. degree. Thesis committee members must have had at least two weeks to read a student's thesis before a defense can be scheduled. For the M.S., - Research Track option, the thesis must present data of sufficient quality and quantity so as to convince the thesis committee that the student possesses the ability to conduct high quality scientific research in the area of interest. For the M.S. – Academic Track option, the student's research must result in a comprehensive treatise which reviews, critically analyzes and assimilates a body of knowledge into a Masters thesis approved by the student's thesis committee. The student must defend the research protocol, results, and conclusions at an oral Thesis Defense. To satisfactorily pass the thesis defense, a student may not receive more than one unfavorable vote from a member of the Thesis Committee.

Departmental Faculty

Professors

George R. Aronoff, *Medicine*
 Frederick W. Benz
 Aruni Bhatnagar, *Medicine*
 Theresa S. Chen
 Nicholas A. Delamere, *Ophthalmology & Visual Sciences*
 John W. Eaton, *Medicine*
 Paul N. Epstein, *Pediatrics*
 Richard E. Goldstein, *Surgery*
 David Gozal, *Pediatrics*
 Evelyne Gozal, *Pediatrics*
 Ramesh C. Gupta
 Theo Hagg, *Neurological Surgery*
 David W. Hein, *Chair*
 Harrell. E. Hurst
 Y. James Kang, *Medicine*
 Craig J. McClain, *Medicine*
 W. Glenn McGregor, *Medicine*
 Kelly M. McMasters, *Surgery*
 Donald M. Miller, *Medicine*
 William M. Pierce, Jr., *Program Director*
 M. Michele Pisano, *Birth Defects Center*
 George C. Rodgers, *Pediatrics*
 Peter P. Rowell
 Donald E. Nerland
 J. Christopher States
 Janice E. Sullivan, *Medicine*
 David J. Tollerud, *Environmental & Occupational Toxicology*
 Leonard C. Waite
 Walter M. Williams
 Hong Ye, *Medicine*
 Michael E. Brier, *Medicine*
 Avital Schurr, *Anesthesiology and Perioperative Medicine*
 John L. Wong, *Chemistry*
 William W. Young, *Birth Defects Center*

Associate Professors

Shirish Barve, *Medicine*
 Haribabu Bodduluri, *Microbiology & Immunology*
 Teresa Whei-Mei Fan, *Chemistry*
 Steven R. Myers
 Zhao-Hui Song
 Yang Wang, *Pediatrics*
 Wolfgang Zacharias, *Medicine*

Assistant Professors

Gavin E. Arteel
 Jason A. Chesney, *Medicine*
 Michal Hetman, *Neurological Surgery*
 Mary J. Kennedy, *Pediatrics*
 LaCreis R. Kidd
 Wayne S. Zundel, *Radiation Oncology*
 Lu Cai, *Medicine*
 Daniel J. Conklin, *Medicine*

Ye Qi Liu, *Pediatrics*
 Kevin H. Stansbury, *Brown Cancer Center*

Instructors

Jian Cai

Doctor of Philosophy in Physiology and Biophysics

Major Code: PHZB

Degree Code: PHD

Unit: GM

Department Webpage: <http://www.louisville.edu/medschool/physiology/>

General Information

The Department of Physiology and Biophysics is a member of the Graduate School of the University of Louisville. As such, one of the goals of the Department is to provide students with advanced training that leads to the Ph.D. Degree in Physiology and Biophysics. The research interests of the Department are quite broad to provide each student with a wide selection of possible research and graduate education opportunities. Our doctoral graduate program is designed primarily to prepare students for a research career in basic and applied physiology.

The Ph.D. degree is designed for the student who wishes a professional life that involves original, independent research and who desires knowledge that will permit competent advanced teaching in a physiology area. The Ph.D. degree requires that the student reaches a high level of creativity and expertise and therefore, mere completion of a prescribed number of courses is not adequate for receipt of the Doctoral degree.

Typically, a student with a bachelor's degree will require about four years to complete the Ph.D. program. However, the program does not have a fixed time for the awarding of the Ph.D. degree and would obviously depend on the progress of the individual student.

Admission Requirements

The requirements for admission are:

1. A genuine interest in graduate work and the desire for a significant research career in the Biomedical Sciences.
2. B.A., B.S. or an equivalent degree.
3. An cumulative undergraduate grade point average of 3.0 or higher on a scale of 4.0 (A=4, B=3, etc.).
4. Graduate Record Examination (GRE) scores which average at 50 percentile or higher in verbal, quantitative and analytical sections. Conditional Acceptance may be granted on the basis

of the Medical College Admissions Test (MCAT) scores or equivalent until GRE is completed.

5. In the case of a foreign applicant from a non-English speaking country, the applicant must achieve a TOEFL examination score of 550 (paper) or 213 (computerized) with the Exam taken in the United States.

6. Specific course prerequisites include: Biology (2 sem), Chemistry (2 sem), Organic Chemistry (2 sem) and Physics.

7. Under special circumstances, deficiencies and prerequisites may be waived or removed during the first year of training.

Degree Requirements

The Ph.D. degree is designed for a student who wishes a professional life that involves original independent research and desires knowledge that will permit competent advanced teaching in a physiology area. The Ph.D. degree requires that the student reaches a high level of creativity and expertise, therefore completion of a prescribed number of courses is not adequate for receipt of the doctoral degree.

At least three years of contiguous enrollment in approved courses beyond the baccalaureate degree are required for the Ph.D. degree. With the Graduate Dean's approval, up to a maximum of 12 semester hours of this requirement may be credited for post-baccalaureate work in other professional or graduate degree programs. A minimum of one year (24 semester hours) shall be taken in full-time residency at the University of Louisville. By the end of the program the student must demonstrate the ability to conduct independent research.

The required program of academic study must include (if not completed with a grade of B or better prior to admission to the Department) the following courses:

- Systemic Physiology I and II (PHZB 605 and 606) or equivalent
- Graduate Biochemistry (BIOC 645 and 647) or equivalent
- Advanced Physiology (PHZB 611)
- Cell Biology (MBIO 667) or equivalent
- Experimental Physiology Methods (PHZB 625)
- Integrated Systemic Physiology (PHZB 609)
- Seminar in Physiology (PHZB 617) two semesters
- At least one additional Graduate (600) level course

A typical Doctoral Program for the Traditional Student would be:

First Semester (1st Fall)

- Systemic Physiology I (PHZB 605, 3 cr)
- Graduate Biochemistry I (BIOC 645, 4 cr)
- Seminars in Physiology (PHZB 617, 1 cr)
- Physiological Methods (PHZB 625, 3 cr)

Second Semester (1st Spring)

- Systemic Physiology II (PHZB 606, 3 cr)
- Graduate Biochemistry II (BIOC 647, 4 cr)
- Cell Biology (MBIO 667, 3 cr)
- Seminars in Physiology (PHZB 617, 1 cr)

Third Semester (1st Summer)

- Advanced Human Physiology (PHZB 611, 4 cr)
- Research (PHY 619, 2 cr)

Fourth Semester (2nd Fall)

- Integrated Systemic Physiology (PHZB 609, 3 cr)
- Research (PHZB 619, 3 cr)
- Elective (600..., 3 cr)
- Ph.D. Qualifying Exam (*M.S. Final Exam and Degree*)

Fifth Semester (2nd Spring)

- Research (PHY 619, 9 cr)
- M.S. Final Exam (*Ph.D. Qualifying Exam*)

Sixth Semester (2nd Summer)

- Research (DOCT)

Seventh Semester (3rd Fall)

- Research (DOCT)

Eighth Semester (3rd Spring)

- Research (DOCT)

Ninth Semester (3rd Summer)

- Research (DOCT)

Tenth Semester (4th Fall)

- Research (DOCT)

Eleventh Semester (4th Spring)

- Research (DOCT)
- Dissertation / Defense

The program requires that a student, upon completion of the minimum course requirements (usually at the end of the second year) must take and pass the Ph.D. Qualifying Examination. Graduation requirements are that the student maintain at least a B average and produce an acceptable dissertation based on original research.

Application Procedures

Applications will be reviewed beginning January 5th (of each calendar year). Stipend Support is given out based on each application's merit once completed. Therefore, stipends are awarded on an approved and accepted, first-come, first-served basis. It behooves the applicant to have all materials submitted by the above date of January 10th of each calendar year.

Submit all components directly to:

Office of Graduate Admission
University of Louisville
Houchens Building, Suite 105
Louisville KY 40292

Courses

The Department offers a variety of graduate courses including Human Physiology, Cardiovascular Physiology, Endocrinology and Reproductive Physiology, Pulmonary and Exercise Physiology, Renal Physiology and Vascular Smooth Muscle

Function as well as an exciting seminar series and special topics courses.

Financial Aid

Students admitted to the Department of Physiology and Biophysics Ph.D. program are supported by financial aid with a fellowship or an assistantship. These students are given a stipend, full tuition remission, and health insurance for up to five years.

Research Facilities

All faculty members have excellent research facilities equipped with state-of-the-art equipment. Major items of available research equipment include intravital and fluorescent microscopes, computer data acquisition systems, image enhancement systems, cellular and molecular core facilities and a state-of-the-art instrumentation laboratory. In addition, within the Health Science Center complex, the Department has access to cold rooms, constant temperature rooms, liquid scintillation counters, a photography laboratory, a machine shop, and a state-of-the-art laboratory animal research facility that is AALAC approved. The Kornhauser Library located on the Health Science Center campus contains the most current physiology and medical journals as well as an extensive collection of current books and monographs.

The University of Louisville dates back to 1798 and the Medical School is one of the oldest in the United States. During the 1970's, the University experienced a period of remarkable growth which included the construction of an entirely new Health Sciences Center (HSC). The Health Sciences Center includes the Schools of Medicine, Dentistry, Nursing and Allied Health, the University Hospital, Regional Cancer Center, the Ambulatory Care Center and the Eye Research Institute. A number of nearby hospitals are also affiliated with the Health Sciences Center.

The Department of Physiology and Biophysics is located in a 14-story high-rise building which is devoted to basic science research and teaching. The Department has modern, well equipped laboratories specifically designed for physiological research. There are currently 18 faculty in the Department and a description of their research interests can be found at the Department website. In addition, the Department has many Joint, Associate and Adjunct Faculty who regularly contribute in the research and teaching endeavors of the Department.

Master of Science in Physiology and Biophysics

Major Code: PHZB

Degree Code: MS

Unit: GM

Department Webpage: <http://www.louisville.edu/medschool/physiology/>

General Information

The Department of Physiology and Biophysics offers advanced training which leads to the degree of Masters of Science in Physiology and Biophysics. The Department provides each student with a wide selection of possible research and graduate education opportunities to give broad-based knowledge and experience in Physiology.

Successful completion of our Departmental Masters of Science Graduate Program can provide several career options:

- to develop competence in directed research and to develop a good general knowledge of physiology.
- to prepare for advanced technical positions in industry, government and university research laboratories.
- to explore the possibility of a future career as an independent scientist in medically-related research.

Admission Requirements

The requirements for admission are :

1. B.A., B.S. or an equivalent degree.
2. An overall grade point average of 2.8 or higher on a scale of 4.0 (A=4, B=3, etc.).
3. Graduate Record Examination (GRE) scores which average at 50 percentile or higher in verbal, quantitative and analytical sections. Conditional Acceptance may be granted on the basis of the Medical College Admissions Test (MCAT) scores or equivalent until GRE is completed.
4. In the case of a foreign applicant from a non-English speaking country, the applicant must achieve a TOEFL examination score of 550 (paper) or 213 (computerized) with the Exam taken in the United States.

Degree Requirements

At least 30 semester hours beyond the baccalaureate degree are required for the degree of Masters of Science and at least 24 credit hours must have been earned at the University of Louisville. A maximum of 12 semester hours of this requirement may be credited from post-baccalaureate work in other professional or graduate degree programs by a special request.

Minimum course requirements include:

- Systemic Physiology I and II (PHZB 605 and 606) or equivalent
- Graduate Biochemistry (BIOC 645 and 647) or equivalent
- Physiological Methods (PHZB 625)
- Seminars in Physiology (PHZB 617)
- Research (PHZB 619)

A typical Masters Program would be:

First Semester (Fall)

- Systemic Physiology I (PHZB 605, 3 cr)

- Graduate Biochemistry I (BIOC 645, 4 cr)
- Seminars in Physiology (PHZB 617, 1 cr)
- Physiological Methods (PHZB 625, 3 cr)
- Research (PHZB 619, 4 cr)

Second Semester (Spring)

- Systemic Physiology II (PHZB 606, 3 cr)
- Graduate Biochemistry II (BIOC 647, 4 cr)
- Seminars in Physiology (PHZB 617, 1 cr)
- Research (PHZB 619, 7 cr)

Third Semester (2nd Fall)

- Research (MAST)

Fourth Semester (2nd Spring)

- Research (MAST)
- Degree Completion (one of the three general options)
- M.S. Final Exam (Ph.D. Qualifying Exam) for those who wish to continue in the Ph.D. Program
- M.S. Final Exam (Written Paper)
- M.S. Final Exam (Formal Presentation)

Applications are requested to be complete by July 1st (of each calendar year).

Submit all components directly to:

Office of Graduate Admissions
University of Louisville
Houchens Building, Suite 105
Louisville, KY 40292

Courses

The Department offers a variety of graduate courses including Human Physiology, Cardiovascular Physiology, Endocrinology and Reproductive Physiology, Pulmonary and Exercise Physiology, Renal Physiology and Vascular Smooth Muscle Function as well as an exciting seminar series and special topics courses.

Tuition

Tuition information is provided by the Bursar and is found at: <http://www.louisville.edu/admin/bursar/burstf1.htm>.

Financial Aid

No Departmental financial aid is available for M.S. students.

Financial Aid information in the form of loans provided by the University can be found within the financial aid website located at: <http://www.louisville.edu/student/services/fin-aid/>.

Research Facilities

All faculty members have excellent research facilities equipped with state-of-the-art equipment. Major items of available research equipment include intravital and fluorescent

microscopes, computer data acquisition systems, image enhancement systems, cellular and molecular core facilities and a state-of-the-art instrumentation laboratory. In addition, within the Health Science Center complex, the Department has access to cold rooms, constant temperature rooms, liquid scintillation counters, a photography laboratory, a machine shop, and a state-of-the-art laboratory animal research facility that is AALAC approved. The Kornhauser Library located on the Health Science Center campus contains the most current physiology and medical journals as well as an extensive collection of current books and monographs.

The University of Louisville dates back to 1798 and the Medical School is one of the oldest in the United States. During the 1970's, the University experienced a period of remarkable growth which included the construction of an entirely new Health Sciences Center (HSC). The Health Sciences Center includes the Schools of Medicine, Dentistry, Nursing and Allied Health, the University Hospital, Regional Cancer Center, the Ambulatory Care Center and the Eye Research Institute. A number of nearby hospitals are also affiliated with the Health Sciences Center.

The Department of Physiology and Biophysics is located in a 14-story high-rise building which is devoted to basic science research and teaching. The Department has modern, well equipped laboratories specifically designed for physiological research. There are currently 18 faculty in the Department and a list of their research interests describes each emphasis in more detail. In addition, the Department has many Joint, Associate and Adjunct Faculty who regularly contribute in the research and teaching endeavors of the Department.

Departmental Faculty

Professors

Irving G. Joshua, *Chair*
Gary L. Anderson
Patrick D. Harris
Frederick N. Miller
John C. Passmore
Richard W. Stremel, *Associate Dean of the Graduate School*
David L. Wiegman, *Vice Dean of the Medical School*

Associate Professors

William B. Wead, *Vice-Chair*
Ayotunde S. O. Adeagbo
William D. Ehringer
David Lominadze
Claudio Maldonado
Stanley D' Souza
Jeff C. Falcone
John T. Fleming
Andrew M. Roberts
Dale A. Schuschke
Suresh C. Tyagi

Emeritus

James C. Moore

X. J. Musacchia

Joint Faculty

Roberto Bolli, *Medicine, Endowed Chair*

Richard N. Garrison, *Surgery*

Sham S. Kakar, *Medicine*

Associate Faculty

Robert D. Acland, *Surgery*

Ronald D. Fell, *Biology, Chair*

Susan Galandiuk, *Surgery*

Andrea S. Gobin, *Bio-Engineering*

Evelyne Gozal, *Pediatrics*

Susan T. Ildstadt, *Medicine*

Steven P. Jones, *Medicine*

Nicholas Mellen, *Pediatrics*

Jennifer L. Olive, *Health & Sport Sciences*

Jerry Yu, *Medicine*

School of Music

Christopher P. Doane, Ph.D., Dean

The School of Music offers the following masters programs through the Graduate School:

Music Composition – M.M.

Music Education – M.M.E.

Music History and Literature – M.M.

Music Performance – M.M.

Music Theory – M.M.

General Information

The School of Music offers training toward two specific master's degrees: Master of Music and Master of Music Education. Major subjects in the Master of Music curriculum are music performance, music history, or theory/composition. The Master of Music Education program allows an applied music minor in an instrument, voice, or conducting. The music history and theory departments offer basic instruction for all students at the undergraduate level as well as advanced study for those wishing to pursue graduate work in these fields.

In addition to the general degree requirements described in the General Information section of the Graduate Catalog, the following degree requirements must be met:

- The student shall obtain permission from the Graduate Division Committee to begin work at the graduate level.
- All students must qualify for non-conditional status no later than the end of the second semester of full-time residence, or before eighteen (18) semester hours have been completed.

To qualify for degree candidacy the student must have: (a) proof that all deficiencies in music history, literature and theory have been removed, (b) an academic record with a minimum of nine (9) hours of graduate credit with a grade point average of 3.0, (c) an inclusive program of studies fulfilling the requirements of a master's curriculum, approved by the major professor and the departmental chairperson; (d) in the case of a program requiring a master's thesis or professional paper, a proposed topic for the thesis or paper and a proposed membership for a reading committee to provide guidance during the writing of the thesis or paper. [See bullet six (6) below]

- As per the Graduate School requirements, at least half of the required credits for the master's degree must be at the 600 level, excluding thesis, internships, or practicums;
- In order to be in good standing, graduate students must have a cumulative 3.0 grade point average. A student must be in good standing in order to graduate. No more than six (6) hours with any "C" or "C+" grade will be accepted toward a degree, and no grade below a "B-" will be accepted in a major subject. A student whose cumulative GPA falls below 3.0 will be placed on probation by the Graduate School. Students are ordinarily not permitted to continue on probation for more than one semester.
- The School of Music does not accept transfer grades below a "B". No credit is transferred for applied music. Advanced standing for applied music may be awarded at a jury. Music history and theory credits will be evaluated for transfer by the Director of Graduate Studies and the respective faculty. Ensemble credits appropriate to the new degree program may be considered for transfer, but not to exceed one per semester.
- Degree candidates in performance are required to give a public recital, normally during the candidate's final semester of study. Preparation and presentation of the recital shall follow the guidelines in the Handbook for Graduate Students;
- Degree candidates in music history or theory and composition are required to submit a thesis or major composition for evaluation by the reading committee. The M.M. Thesis in music composition takes the form of a musical score. Apart from considerations such as page size and layout, composition theses conform to the guidelines issued by the Graduate School. The deadline for formal approval of M.M. composition theses is the last day of classes in the semester in which the degree is expected to be conferred. Approval signatures of all members of the thesis committee are required prior to the final graduate oral examination.
- All students are required to pass an oral examination given by the Graduate Committee before the end of the semester in which the degree is to be granted. It may cover all areas of endeavor undertaken by the student in his graduate program or believed essential to the student's background.
- A candidate who fails the oral examination at the end of a semester may not be given a second one before the regular time for such an examination at the end of the next semester or summer session. A candidate who fails in the second oral examination shall not be granted the degree of M.M. or M.M.E. from this university.

- In comparing degree programs, please note that among universities, many times ensembles are required, but without credit. Our required ensembles are included in the number of required degree hours.
- Part-time students (with the exception of those in M.M.E. degree programs) must participate in one ensemble for each 18 hours of course work completed. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.
- Transfer of more than 6 hours from a degree program of an accredited institution in which a degree has been previously earned will only be granted on recommendation of the student's division and approval of the Director of Graduate Studies in consultation with the Graduate Committee. The request will be considered provided that the additional hours have not been earned by extension and that the University of Louisville minimum residency requirements have been met as stated in the Graduate Catalogue.
- Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested with the restriction that the minimum residency requirement be maintained in compliance with the Graduate Catalogue.
- Hours earned beyond the minimum in any one curricular area apply only to that area and cannot be divided in order to satisfy a requirement in another area.

Admission Requirements

In addition to the general requirements for admission to the Graduate School, the following specific requirements must be met:

- To be admitted to the Graduate Division of the School of Music, the applicant should possess a baccalaureate degree in the area (or an equivalent one) to be pursued in advanced studies.
- Applicants must meet the specific entrance requirements established by the major department.
- Applicants are required to take entrance examinations in music history, literature, and theory. Students may be required to take, without credit, courses in which they are deficient as indicated by the examination results.
- All full-time students are required to enroll in Bibliography and Research Methods (MUS 607), within their first two semesters of graduate work. Part-time students must enroll in MUS 607 before registering for more than ten (10) hours of graduate work.
- Graduate applicants to the School of Music must submit GRE scores with the application form.

The School of Music provides each student with guidelines to assist in preparation for the entrance exams and a copy of the Handbook for Graduate Music Students. Students are expected to read the School of Music handbook and the University Graduate Catalog and to follow regulations and procedures regarding their specific degree program at the University of Louisville. In particular, students are advised to observe the request for submitting GRE scores for admission to the Graduate School. Graduate study in music begins with the preparation for the entrance examinations in Music History and Music

Theory and concludes with the graduate oral exam that is taken when all requirements have been met.

Master of Music in Music Composition

Major Code: COMP

Degree Code: MM

Unit: GU

Department Webpage: <http://www.louisville.edu/music/>

Program Curriculum Requirements

Prerequisites

1. Bachelor of Music degree or equivalent.
2. Demonstration, by examination, of skills and capacities in the following fields:
 - written, aural, and keyboard harmony;
 - melodic, harmonic, and rhythmic dictation;
 - elementary counterpoint; and
 - history and literature of music, and analytic understanding of musical forms and genres.
3. Evidence of preparation for advanced work in the area, as follows:

Applicants to the track in Music Composition must submit original works to indicate ability and technical facility in the field of composition. Students should also have a thorough and practical knowledge of piano as well as a thorough knowledge in the areas of string, brass, woodwind, and percussion instruments.

4. GRE scores.

Curriculum

Core

- Music History Review (MUS 500)* 0
- Music Theory Review (MUS 400)* 0
- Bibliography and Research Methods (MUS 607) 3
- Music History Seminar (600 level) 3
- Music Theory** 4
- Additional Music Theory or Music History Seminar (500 or 600 level) 3
- Analysis (MUS 647, 648, 651, or 653) 3
- Ensemble (3 semesters of major ensemble) 3
- Thesis 4

Total.....23

Other Requirements

All students must pass an oral examination after all course work is completed.

Music Composition Track

- Advanced Composition (MUS 643, 644, 645)** 9
- Graduate Composition Seminar (MUS 669 - Co-requisite for MUS 643-645)
- Applied Music (minimum of 2 semesters; may include 4.....13
- Conducting, but excludes additional semesters of Applied Composition)

Minimum Total.....36

Notes:

* These courses may be satisfied by passing the entrance examinations in these areas.

** Students in the Music Composition Track should take Digital Techniques I & II (MUS 667-668).

***Graduate composition majors are required to present public performances of their works in at least two semesters of their enrollment for a total of at least 20 minutes of music. The graduate thesis will not be granted final approval until this requirement is met.

Master of Music Education in Music Education

Major Code: MUED

Degree Code: MME

Unit: GU

Department Webpage: <http://www.louisville.edu/music/>

Program requirements

Prerequisites

1. Bachelor of Music Education degree or equivalent.
2. Classroom teaching experience (exclusive of practice teaching and prior to, or concurrent with, graduate study).
3. Demonstration, by examination, of skills and capacities in the following fields:
 - written, aural, and keyboard harmony;
 - melodic, harmonic, and rhythmic dictation;
 - elementary counterpoint; and
 - history and literature of music, and analytic understanding of musical forms and genres.
4. GRE scores.

Curriculum

- Music History Review (MUS 500)* 0
- Music Theory Review (MUS 400)* 0

- Bibliography and Research Methods (MUS 607) 3
- Qualitative Research Methods (MUED 628) 2
- Foundations of Music Education (MUED 629) 2
- Quantitative Research Methods (MUED 630) 2
- Learning Theories in Music Education (MUED 639) 2
- Music Education and Related Courses 5-6
- Applied Music (chosen from major or minor performance Fields, including Conducting) 4
- Music History (500 or 600 level) 3
- Music Theory (500 or 600 level) 2-3
- Thesis** 4

Minimum Total.....30

Other Requirements

It is recommended that full-time MME students enroll in ensembles during their Degree program. All students must pass an oral examination after all course work is completed.

Notes:

* These course may be satisfied by passing the entrance examinations in these areas.

** Students are required to prepare either a thesis (4 semester hours of credit) or a professional paper (without credit). In the latter case, 4 hours of coursework will be determined by the student and graduate advisor in order to achieve the 30-hour minimum requirement.

Master of Music in Music History and Literature

Major Code: MUHM

Degree Code: MM

Unit: GU

Department Webpage: <http://www.louisville.edu/music/>

Program requirements

Prerequisites

1. Bachelor of Music degree or equivalent.
2. Demonstration, by examination, of skills and capacities in the following fields:
 - written, aural, and keyboard harmony;
 - melodic, harmonic, and rhythmic dictation;
 - elementary counterpoint; and
 - history and literature of music, and analytic understanding of musical forms and genres.
3. Evidence of preparation for advanced work in the area, as follows:

Applicants for the track in Music History must submit a paper to the Music History faculty demonstrating ability to write efficiently and to do elementary research. In addition, applicants must complete the entrance examination in Music History with an average score of no less than seventy (70) for admission to the Music History curriculum. Before admission to candidacy, students in Music History are required to have a reading ability in one foreign language (preferably German, French, or Italian) demonstrated by examination administered in cooperation with the Department of Classical & Modern Languages (fee \$20.00). The examination must be passed before the student is admitted to candidacy.

4. GRE scores.

Core Curriculum

- Music History Review (MUS 500)* 0
- Music Theory Review (MUS 400)* 0
- Bibliography and Research Methods (MUS 607) 3
- Music History Seminar (600 level) 3
- Music Theory 4
- Additional Music Theory or Music History Seminar 3
- (500 or 600 level)
- Analysis (MUS 647, 648, 651, or 653) 3
- Ensemble (3 semesters of major ensemble)** 3
- Thesis 4

Total.....23

Other Requirements

All students must pass an oral examination after all course work is completed.

Music History and Literature Track

- Music History Seminars (600 level) 6
- Additional Music Theory or Analysis 2
- Music Electives 5.....13

Minimum Total.....36

Notes:

* These courses may be satisfied by passing the entrance examinations in these areas.

**The recommended ensembles for the Music History Track include Early Music Ensemble and New Music Ensemble.

Master of Music in Music Performance

Major Code: MUSP

Degree Code: MM

Unit: GU

Department Webpage: <http://www.louisville.edu/music/>

Program Curriculum Requirements

Prerequisites

1. Bachelor of Music degree or equivalent.
2. Demonstration, by examination, of skills and capacities in the following fields:
 - written, aural, and keyboard harmony;
 - melodic, harmonic, and rhythmic dictation;
 - elementary counterpoint; and
 - history and literature of music, and analytic understanding of musical forms and genres.
3. Audition in major field, demonstrating a level equivalent to the completion of a Bachelor of Music in Performance degree. Students intending to major in voice must have a reading knowledge of one foreign language and satisfactory diction in two others.
4. Students in the Concentration in Jazz must demonstrate a level of competency in improvisation, jazz keyboard, jazz theory, and jazz history. Remedial courses are in place to assist students who do not meet these requirements.
5. GRE scores.

Core Curriculum

- Music History Review (MUS 500) * 0
- Music Theory Review (MUS 400) * 0
- Bibliography and Research Methods (MUS 607) 3
- Music History Seminar (500 or 600 level) 3
- Music Theory (500 or 600 level)** 4
- Applied Study (600 level)*** 8
- Graduate Recital (MUS 697)**** 0.....18

Other Requirements:

All students must pass an oral examination after all course work is completed.

Notes:

* These courses may be satisfied by passing the entrance examinations in these areas.

** For students in the Concentration in Jazz, Jazz Theory (MUS 539-02) is recommended.

*** The applied course numbers for the degree concentrations are as follows: Choral Conducting: MUS 601, 602, 659, 660 (Students may substitute additional semesters of MUS 659, 660 for MUS 601, 602 at the discretion of the Director of Choral Activities.) Orchestral/Wind Conducting/Piano Pedagogy: MUS 601, 602, 611, 612 Jazz Performance: MUS 605, 606, 615, 616 (Students whose focus is jazz composition/arranging may substitute 4 hours of jazz arranging.) Instrumental/Organ/Piano/Vocal Performance: MUS 603, 604

**** Taken concurrently with final semester of applied study.

Concentration in Choral Conducting

- Additional Applied Study (MUS 611)* 2
- Choral Literature I & II (MUS 530, 531) 4
- Instrumental Conducting and Score Reading (MUS 559) 2
- Ensemble (one per semester) 4
- Music Electives** 6.....18

Total.....36

Notes:

* Must be taken in the semester of the graduate degree recital.

** May include such courses as pedagogy, literature, the student's principal applied instrument, instrumental conducting, or a maximum of 2 additional ensemble credits.

Concentration in Orchestral Conducting

Seminar in Conducting-Instrumental (MUS 659, 660) 4

Seminar in Conducting-Choral (MUS 659, 660) 4

Orchestral Literature I & II (MUS 686, 687) 4

Ensemble (two semesters of major ensemble) 2

Music Electives * 4.....18

Total.....36

* To be chosen from courses in music theory, literature, the student's principal applied instrument, or a maximum of 2 additional ensemble credits.

Concentration in Wind Conducting

- Seminar in Conducting-Instrumental (MUS 659, 660) 4
- Instrumental Conducting and Score Reading (MUS 559) 2
- Band Literature (MUS 561) 2
- Ensemble (one per semester) 4
- Music Electives * 6.....18
- Total.....36

Note:

* To be chosen from pedagogy, literature, the student's principal applied instrument, a maximum of 2 semesters of functional applied study, or a maximum of 2 additional ensemble credits.

Concentration in Instrumental Music

- Additional Applied Study (MUS 613, 614) 8
- Ensemble* 4
- Music Electives** 6.....18
- Total.....36

Note:

* In comparing degree programs, please note that among universities, many times ensembles are required, but without

credit. Our required ensembles are included in the number of required degree hours.

** Students are encouraged to choose courses in literature or pedagogy; up to 2 additional ensemble credits are acceptable.

Other Requirements

Students are expected to present a public recital that comprises no less than sixty (60) minutes of music and follows the guidelines governing public recitals.

Concentration in Jazz Performance

- Advanced Jazz Improvisation (MUS 655) 2
- Standard Jazz Repertoire (MUS 539-03) 2
- Jazz Style and Analysis (MUS 539-01) 2
- Jazz Combo (one per semester) 2
- Jazz or Jazz Repertory Ensemble (one per semester)* 4

Concentration Electives to be selected from: 4

- Music Industry I & II (MUS 535, 536)
- Computers and Music I & II (MUS 553, 554)
- Advanced Jazz Arranging (MUS 656)
- Film/TV Scoring (MUS 657)
- Independent Study (MUS 690)

Special Topics: Summer Jazz Workshop (MUS 691)

Music Electives** 2.....18

Total.....36

* A student may substitute two additional Jazz Combo courses for one of the Jazz or Jazz Repertory Ensemble courses.

** Students are encouraged to choose courses in pedagogy or literature; additional Applied Jazz or Ensemble will not meet this requirement; applied study in a secondary area is acceptable.

Concentration in Organ Performance

- Additional Applied Study (MUS 613-614) 8
- Ensemble 2
- Major Subject and Music Electives* 8.....18

Total.....36

*Must include Organ Literature and Church Music Literature; additional Applied Organ or Ensemble will not meet this requirement. Applied study in a secondary area is acceptable.

Other Requirements

Students are expected to present a public recital that comprises no less than sixty (60) minutes of music and follows the guidelines governing public recitals.

Concentration in Piano Pedagogy

- Piano Pedagogy (MUS 571, 572, 671, 672) 8

- Piano Literature (MUS 561, 562) 4
- Ensemble * 2
- Music Electives** 4.....18
- Total.....36

Notes:

* At least three semesters of ensemble to be chosen from Piano Ensemble or New Music Ensemble.

** Additional Applied Piano or Ensemble will not meet this requirement; applied study in a secondary area is acceptable.

Other Requirements

Students are expected to present a public recital that comprises no less than sixty (60) minutes of music and follows the guidelines governing public recitals.

Concentration in Piano Performance

- Additional Applied Study (MUS 613, 614) 8
- Piano Literature (MUS 561, 562) 4
- Piano Pedagogy (500 or 600 level) 2
- Ensemble * 2
- Music Electives ** 2.....18
- Total.....36

Notes:

* At least three semesters of ensemble to be chosen from Piano Ensemble or New Music Ensemble.

** Additional Applied Piano or Ensemble will not meet this requirement; applied study in a secondary area is acceptable.

Other Requirements

Students are expected to present a public recital that comprises no less than sixty (60) minutes of music and follows the guidelines governing public recitals.

Concentration in Vocal Performance

- Additional Applied Study (MUS 613, 614) 8
- Vocal Literature (MUS 561, 562) 4
- Vocal Pedagogy (MUS 571) 2
- Ensemble * 2
- Music Electives** 2.....18
- Total.....36

Notes:

* Suggested ensembles include Opera Theatre and New Music Ensemble.

** Additional Applied Voice or Ensemble will not meet this requirement; applied study in a secondary area is acceptable.

Other Requirements

Students are expected to present a public recital that comprises no less than sixty (60) minutes of music and follows the guidelines governing public recitals.

Master of Music in Music Theory

Major Code: MUST

Degree Code: MM

Unit: GU

Department Webpage: <http://www.louisville.edu/music/>

Program requirements

Prerequisites

1. Bachelor of Music degree or equivalent.
2. Demonstration, by examination, of skills and capacities in the following fields:
 - written, aural, and keyboard harmony;
 - melodic, harmonic, and rhythmic dictation;
 - elementary counterpoint; and
 - history and literature of music, and analytic understanding of musical forms and genres.
3. Evidence of preparation for advanced work in the area, as follows:

Applicants to the track in Music Theory must submit a portfolio of papers that incorporate a theoretical or analytical component. In addition, compositions should be submitted if available.

4. GRE scores.

Curriculum

Core

- Music History Review (MUS 500)* 0
- Music Theory Review (MUS 400)* 0
- Bibliography and Research Methods (MUS 607) 3
- Music History Seminar (600 level)** 3
- Music Theory 4
- Additional Music Theory or Music History Seminar 3 (500 or 600 level)
- Analysis (MUS 647, 648, 651, or 653) 3
- Ensemble (3 semesters of major ensemble) 3
- Thesis 4.....23

Other Requirements

All students must pass an oral examination after all course work is completed.

Music Theory Track

- Pedagogy of Theory (MUS 641) 2
- Additional Music Theory 1

- Advanced Composition*** 6
- Graduate Composition Seminar (MUS 669 - Co-requisite for Advanced Composition) 0
- Digital Techniques I (MUS 667) 2
- Music Electives 2.....13

Minimum Total.....36

Notes:

* These courses may be satisfied by passing the entrance examinations in these areas.

** Students in the Theory Track should take Foundations of Music Theory (MUS 652).

***To be chosen from MUS 543, 544, 643, 644 as determined by the composition faculty. Students enrolled in 500 level Advanced Composition are required to present public performances of their original works totaling at least 8 minutes of music; students enrolled in 600 level Advanced Composition present public performances of at least 8 minutes of music per semester.

Departmental Faculty

Professors

Robert Amchin, *Division Head-Music Education and Music Therapy*

Jack Ashworth, *Director of Early Music Ensemble*

Distinguished Teaching Professor

Jean Christensen, *Division Head-Music History*

Anne Marie de Zeeuw, *Area Coordinator-Music Theory*

Distinguished Teaching Professor

Christopher Doane, *Dean*

Donn Everette-Graham

Brenda E. Kee, *Area Coordinator-Keyboards*

Herbert Koerselman

Naomi Oliphant, *Associate Dean*

Distinguished Teaching Professor

Steve Rouse, *Division Head-Music Theory and Composition*

Mark Satterwhite

Frederick Speck, *Director of Bands*

Edith Davis Tidwell, *Area Coordinator-Voice*

Distinguished Teaching Professor

Michael Tunnell, *Distinguished Teaching Professor*

Barbara Wheeler, *Director of Music Therapy*

Kent Hatteberg, *Director of Choral Activities*

John LaBarbera

Michael Tracy, *Division Head- Jazz Studies*

Associate Professors

Bruce Heim

Seow-Chin Ong

Gregory Byrne, *Director of Athletic Bands*

Jerry Tolson

Assistant Professors

Julia Shinnick

Kimchere Lloyd, *Director of Orchestral Studies and Opera*

Krista Wallace-Boaz

Lecturers

Robert Boozman

Paul Dell Aquila

Christopher Fitzgerald

Kathleen Karr

Matthew KarrJohn Moore

Vernon Cherrix

Emeritus/Emerita

Jerry W. Ball

Paul R. Brink

Doris Owen Bickel

Wesley K. Morgan

Robert Weaver

Melvin Dickinson

Frances Fuge

Lee Luvisi

Daniel McAninch

Peter McHugh

Acton Ostting

Richard Spalding

Loren Waa

School of Nursing

Mary H. Mundt, Ph.D., Dean

The School of Nursing offers the following degree programs through the Graduate School:

Nursing – Ph.D.

Nursing – M.S.N.

Doctor of Philosophy in Nursing

Major Code: NURS

Degree Code: PHD

Unit: GN

Department Webpage: <http://www.louisville.edu/nursing>

General Information

The University of Louisville School of Nursing is an integral component of the University and Academic Health Science

Center that connects to its service community. The School of Nursing is a community in which faculty, staff and students gather to foster excellence in the profession of nursing. This is accomplished through undergraduate and graduate education, continuing education, scholarship and service. Students are prepared to practice in a variety of settings with clients across the lifespan in order to meet the changing health care needs of society. As a citizen of the larger community, a major focus of the School of Nursing is to meet the diverse needs of a metropolitan population through the education of professional nurses.

The Doctor of Philosophy in Nursing is designed to prepare nurse scientists who will assume a variety of roles in education, research, leadership and health policy. The goal of the program is to prepare nurse scientists to: a) generate knowledge, test interventions and evaluate outcomes to reduce risks of illness/disability and promote quality of life, b) collaborate with other disciplines to improve the delivery of health care, c) assume research, leadership, executive, public policy and/or teaching roles, and d) affect health policy through the application of scientific knowledge.

Two progression tracks will be offered in the programs: (1) B.S.N. to Ph.D. and (2) M.S.N. to Ph.D. The B.S.N. to Ph.D. track is an innovative approach to recruit students into graduate study at an early point in their nursing career. These students will complete the first year of coursework at the master's level and then continue on to the doctoral level work without earning a master's degree. The M.S.N. to Ph.D. students will enter directly into the doctoral coursework. The Ph.D. in Nursing consists of at least 63 credit hours of coursework beyond the baccalaureate degree or 45 credit hours beyond a master's degree plus 12 dissertation credit hours. Full or part-time programs of study are available; however, full time study is highly recommended to allow students to devote themselves entirely to the program and immerse themselves in the life of a scholar.

Ph.D. in Nursing: Required Courses

B.S.N. Students will complete 18 hours of required master's level courses.

- NURS 605: Foundations for Advanced Practice (3 credit hours)
- NURS 606: Health Care Systems (3 credit hours)
- NURS 651: Evidence Based Nursing for Advanced Practice (3 credit hours)
- NURS 652: Statistics (3 credit hours) OR ELFH 601: Applied Statistics (3 credit hours)
- NURS 657: Health Promotion and Illness Prevention Across the Lifespan (3 credit hours)
- PHKC 610: Introduction to Health Informatics (3 credit hours)

B.S.N. and M.S.N. Students will complete the following required doctoral level courses

- Advanced Statistics (9 credit hours)
- Philosophy of Science (3 credit hours)
- Theoretical Basis of Nursing (3 credit hours)

- Research Methodology I: Qualitative Research Methods (3 credit hours)
- Research Methodology II: Quantitative Design (3 credit hours)
- Research Methodology III: Nursing Measurement (3 credit hours)
- Health Policy: An Evidence-Based Approach (3 credit hours)
- Seminar in Advanced Nursing Leadership (3 credit hours)

Practicums

Research Methods Practicum (2 credit hours)

Students will complete an additional two credit hours of practicum work.

- Education/Leadership Practicum: 1 credit
- Health Policy Practicum: 1 credit

Doctoral Seminar (2 credit hours)

DISSERTATION (12 Credit hours)

Elective (9 credit hours)

Master of Science in Nursing

Major Code: NURS

Degree Code: MSN

Unit: GN

Department Webpage: <http://www.louisville.edu/nursing>

Admissions Policies – School of Nursing

Students may be admitted to the program for the fall or spring semester. Applications for each term will be reviewed and students will be contacted regarding their admission status within 4-6 weeks after the deadline.

Application Deadlines:

- Fall Semester: May 1
- Spring Semester: October 1

In the case of late applications, application materials received after the deadline may only be considered for Non-Degree status and such applicants will be limited to enrolling in six credit hours on a space available basis. Therefore, all applicants are strongly encouraged to apply before the deadline. Absolute deadlines for admissions in Non-Degree status are July 1 for Fall Semester and November 1 for Spring Semester.

Course Offerings

Classes are taught on a single week day. These courses may be taught during the day or in the evening. Some courses are offered only once per year, or every two years based on demand and/or resources. Course offerings are subject to cancellation due to insufficient enrollment. Preceptorship/clinical experiences are scheduled Monday through Friday based on

availability of clinical sites and preceptors. Limited evening and weekend preceptorship experiences may be available. Preceptorship experiences throughout the state are also possible but not guaranteed. The office of the Associate Dean for Academic Affairs is responsible for student placement with preceptors, in collaboration with the Clinical Placement Coordinator and course faculty.

Criteria for Admission to the Master in Nursing Degree Program:

To be considered for admission to Degree Status, the following items must be submitted:

To the Graduate Admissions Office:

- Completed U of L Graduate School Application, including \$50 application fee (application available online at: www.graduate.louisville.edu)
- Official transcripts of all college coursework with a cumulative grade point average of at least 3.0 on a 4.0 scale. Completion of an accredited (by NLN or CCNE) baccalaureate program in nursing must be verified.
- Official transcript verifying enrollment in or completion of a 3 credit-hour graduate level statistics course (applied descriptive and inferential statistics). Successful completion of this course with a grade of “B” or better is a requirement for admission. (Students may contact School of Nursing Office of Student Services at 852-1196 for information on graduate statistics course offerings.)
- Graduate Record Examination (GRE) scores (Successful applicants usually score at 425 or above on each of the verbal and quantitative scores; and 4 on the analytic score).
- Two letters of reference from individuals who can speak of academic and/or professional capabilities and potential. References should be chosen from among: former faculty member, current or immediate past employer, or other nursing/health professional. At least one reference should be from a nurse. These letters should accompany the reference form required by the Graduate School.
- A copy of valid Kentucky registered nurse license (without restrictions) or proof of eligibility for that licensure.

To the School of Nursing, Office of Student Services:

- Completed Graduate Applicant Data Sheet (available online at: <http://www.louisville.edu/nursing>)

A personal interview with faculty may be required.

Students who do not meet admission requirements may contact the U of L School of Nursing Office of Student Services at 502-852-1196 for an advising appointment.

Conditional Admission to M.S.N. Degree Program:

Students who do not meet these admission requirements may be considered for admission in conditional status. An example might be a student with low GRE scores.

Students admitted conditionally will be reevaluated for full degree status based on criteria identified by the committee.

Applications will not be considered for Full or Conditional admission status unless all application materials are available to the review committee by the application deadline date (May 1 or October 1).

Provisional Admission to M.S.N. Degree Program:

Graduating B.S.N. students: Students completing the final semester of their B.S.N. program with a 3.0 or better grade point average may apply for provisional degree or non-degree status (refer to “admission statuses” in the General Information Section of this catalog.)

Criteria for Non-Degree Admission to the Graduate Nursing Program:

Students may enroll in non-degree status to take the pre-requisite graduate level statistics course, required for full M.S.N. degree admission. Submit to Graduate Admissions:

- Graduate School Application including the \$50 fee
- Official undergraduate transcripts of all college coursework including one verifying the completion of the baccalaureate program in nursing (or a transcript indicating that the student is in the final semester of a B.S.N. degree program and will submit a final transcript verifying completion of the B.S.N. degree prior to registration)

Note on non-degree admission criteria:

Students may be admitted to non-degree with a cumulative GPA of 2.75 or above; however, admission to non-degree status does not guarantee admission to the M.S.N. degree program. Students who have a cumulative GPA lower than 3.0 must petition for admission to the degree program. Students may contact School of Nursing Office of Student Services at 852-1196 for assistance with the petition process.

Visiting students from other schools may apply each semester for non-degree status by submitting the following:

To Graduate Admissions:

- Graduate School Application including the \$50 application fee
- A letter of good standing from student’s home school or transcripts from graduate school in which the student is currently enrolled verifying a grade point average of 3.0 or higher.

Important Notes:

Priority enrollment in courses is given to graduate nursing students in Degree status.

Non-degree students are strongly encouraged to verify financial aid requirements as non-degree status may NOT meet eligibility requirements of some financial aid sources.

To move from Non-degree to Degree status, students must submit a NEW U of L application to the Graduate Admissions office indicating that they are applying for M.S.N. degree admission by the application deadline for the semester they wish to be admitted as degree-seeking (October 1 or May 1). Application fee is waived for non-degree students who are re-applying for degree admission.

All application materials listed above in “Criteria for Admission to the Master of Science in Nursing Program” must be received by the appropriate University offices on or before the application deadline for the semester in which the student wishes to be admitted as degree-seeking.

All applicants, regardless of their application status, are required to submit official transcripts for all college work completed. An application fee of \$50.00 is required of all M.S.N. applicants regardless of where the B.S.N. was earned.

Curriculum

Pre-Requisite Course

CONTENT	EQUIVALENT UofL COURSES
Statistics: Applied descriptive and inferential statistics	NURS 652 or ELFH 601 or equivalent

Graduate Nursing: Core Courses

Graduate Nursing Core Courses are required in addition to the specialization courses for each track.

CONTENT	EQUIVALENT UofL COURSES
Genetics: This course will integrate clinical applications of genomics, including current ethical, legal, and social issues and emphasize the responsibility of the advanced practice nurse. Fall	NURS 600
Transition to Practice: This course will assist completing students to make an easier transition to practice as advanced practice nurses. Students will focus on portfolio development, preparation for certification, and legislative/practice issues. Spring	NURS 604

Foundations for Advanced Practice: Focus is on the analysis and application of selected nursing and family theories for advanced practice. Fall	NURS 605
Health Care Systems: The U.S. healthcare system evolution, services, policy, and delivery are examined and compared politically, ethically, technologically, environmentally, and socio-economically. Availability, access, regulation, and accountability are considered using systems theory. Spring.	NURS 606
Advanced Nursing Pharmacology: Provides the basic pharmacological foundation for the nurse practitioner and clinical specialist in advanced practice. Fall.	PHTX 650
Evidence Based Nursing: Analysis of the value of research in advanced nursing practice. Focus is on research theory and process, ethics, critique of the literature, and dissemination of findings. Fall.	NURS 651
Advanced Practice Roles: This web-enhanced course focuses on the advanced practice roles of educator, consultant, researcher, leader, and expert practitioner. Scope of practice, credentialing, reimbursement and future issues are also addressed. Fall.	NURS 653
Introduction Health Informatics: Exploration and analysis of the foundation principles used in studying information utilization in health-related activities through case studies of selected problems and applications. Spring.	PHKC 610

Pathophysiology: Clinical Decision Making: This course provides the student an opportunity to synthesize pathophysiological concepts essential for critical thinking and clinical decision-making by the nurse in an advanced practice role. Spring.	NURS 655
Advanced Clinical Assessment: This course builds upon the basic critical thinking and psychomotor skills that professional nurses use in client care. Emphasis is on the physical, psychosocial, and cultural assessment of individuals and families. Summer.	NURS 656
Health Promotion and Illness Prevention Across the Lifespan: Theoretical and research foundation of health promotion and illness prevention (HPIP). Multi-level HPIP evidence-based interventions related to competencies of advanced practice nurse in various settings will be discussed. Spring.	NURS 657
Research Project: Provides the student an opportunity to develop, implement, and present results of a research study of limited scope.	NURS 698

Specialty track course requirements:

Advanced Nursing Practice Component: Women’s Health NP (includes 630 clinical hours)

Pre-requisite Course: NURS 652 Statistics (3 credit hours)		
Core Courses	Semester Hours	Total
NURS 605 Foundations for Advanced Practice	3	

NURS 606 Health Care Systems	3	
PHTX 650 Advanced Nursing Pharmacology	3	
NURS 651 Evidence Based Nursing	3	
NURS 600 Genetics	2	
NURS 653 Advanced Practice Roles	2	
PHKC 610 Introduction Health Informatics	3	
NURS 655 Pathophysiology in Clinical Decision Making*	4	
NURS 656 Advanced Clinical Assessment*	4	
NURS 657 Health Promotion and Illness Prevention Across the Lifespan	3	
NURS 698 Research Project	2	
NURS 604 Transition to Practice	1	
WHNP core total hours=33		33
Advanced Nursing Practice Component: Offered every 2 years: 2005-2006; 2007-2008; 2009-2010.		
NURS 601 Primary Care I	2	
NURS 603 Family Health	1	
NURS 615 Women’s Health NP I	4	
NURS 616 Women’s Health NP II	7	
NURS 617 Women’s Health NP III	3	
Total Credit Hours		50

Advanced Nursing Practice Component: Advanced Clinical Practice Adult NP (includes 630 clinical hours)

Pre-requisite Course: NURS 652 Statistics (3 credit hours)		
Core Courses	Semester Hours	Total
NURS 605 Foundations for Advanced Practice	3	
NURS 606 Health Care Systems	3	

PHTX 650 Advanced Nursing Pharmacology	3	
NURS 651 Evidence Based Nursing	3	
NURS 600 Genetics	2	
NURS 653 Advanced Practice Roles	2	
PHKC 610 Introduction Health Informatics	3	
NURS 655 Pathophysiology in Clinical Decision Making*	4	
NURS 656 Advanced Clinical Assessment*	4	
NURS 657 Health Promotion and Illness Prevention Across the Lifespan	3	
NURS 698 Research Project	2	
NURS 604 Transition to Practice	1	
Total ANP Core = 33		33
Advanced Nursing Practice Component		
NURS 601 Primary Care I	2	
NURS 602 Primary Care II	3	
NURS 603 Family Health	1	
NURS 624 Advanced Clinical Practice Adult NP I	3.5	
NURS 625 Advanced Clinical Practice Adult NP II	3.5	
NURS 626 Advanced Clinical Practice Adult NP III	3	
Total Credit Hours		49

Advanced Nursing Practice Component: High Risk Clinical: Neonatal NP (includes 600 clinical hours)

Pre-requisite Course: NURS 652 Statistics (3 credit hours)		
Core Courses	Semester Hours	Total
NURS 605 Foundations for Advanced Practice	3	
NURS 606 Health Care Systems	3	

PHTX 650 Advanced Nursing Pharmacology	3	
NURS 651 Evidence Based Nursing	3	
NURS 600 Genetics	2	
NURS 653 Advanced Practice Roles	2	
PHKC 610 Introduction Health Informatics	3	
NURS 698 Research Project	2	
NURS 603 Family Health	1	
NURS 604 Transition to Practice	1	
Total NNP core = 23		23
Advanced Nursing Practice Component: Next clinical cohort begins Spring 2006; subsequent cohorts To Be Determined.		
NURS 629 Advanced Health Assessment of the Neonate	3	
NURS 633 Adv. Clinical Practice: NNP I	4	
NURS 634 Adv. Clinical Practice: NNP II	3	
NURS 635 Adv. Clinical Practice: NNP III	3	
NURS 636 High Risk Clinical: NNP	8	
Total Credit Hours		44

Advanced Nursing Practice Component: Psychiatric Mental Health CNS (includes 504 clinical hours)

Pre-requisite Course: NURS 652 Statistics (3 credit hours)		
Core Courses	Semester Hours	Total
NURS 605 Foundations for Advanced Practice	3	
NURS 606 Health Care Systems	3	
PHTX 650 Advanced Nursing Pharmacology	3	

NURS 651 Evidence Based Nursing	3	
NURS 600 Genetics	2	
NURS 653 Advanced Practice Roles	2	
PHKC 610 Introduction Health Informatics	3	
NURS 647 Clinical Decision Making: Psychopathology	3	
NURS 649 Clinical Psychopharmacology	1	
NURS 656 Advanced Clinical Assessment*	4	
NURS 657 Health Promotion and Illness Prevention Across the Lifespan	3	
NURS 698 Research Project	2	
NURS 604 Transition to Practice	1	
Adult CNS core = 33		33
Advanced Nursing Practice Component: Offered every 2 years: 2005-2006; 2007-2008; 2009-2010.		
NURS 645 Advanced Clinical Practice I: Psych/Mental Health	6	
NURS 646 Advanced Clinical Practice II: Psych/Mental Health	7	
Total Credit Hours		46

Advanced Clinical Practice: Family Nurse Practitioner (includes 770 clinical hours)

Pre-requisite Course: NURS 652 Statistics (3 credit hours)		
Core Courses	Semester Hours	Total
NURS 605 Foundations for Advanced Practice	3	
NURS 606 Health Care Systems	3	
PHTX 650 Advanced Nursing Pharmacology	3	
NURS 651 Evidence Based Nursing	3	
NURS 600 Genetics	2	
NURS 653 Advanced Practice Roles	2	
PHKC 610 Introduction Health Informatics	3	
NURS 655 Pathophysiology in Clinical Decision Making*	4	

NURS 656 Advanced Clinical Assessment*	4	
NURS 657 Health Promotion and Illness Prevention Across the Lifespan	3	
NURS 698 Research Project	2	
NURS 604 Transition to Practice	1	
FNP Core =33		33
Advanced Nursing Practice Component:		
NURS 601 Primary Care I	2	
NURS 602 Primary Care II	3	
NURS 603 Family Health	1	
NURS 660 Advanced Clinical Practice: Family Nurse Practitioner Seminar I	2	
NURS 661 Advanced Clinical Practice: Family Nurse Practitioner Clinical I	3	
NURS 662 Advanced Clinical Practice: Family Nurse Practitioner Clinical II	4	
NURS 663 Advanced Clinical Practice: Family Nurse Practitioner Internship	4	
NURS 664 Common Health Problems of the Pediatric Client	1	
Total Credit Hours		53

Advanced Nursing Practice Component: Adult CNS (includes 500 clinical hours)

Pre-requisite Course: NURS 652 Statistics (3 credit hours)		
Core Courses	Semester Hours	Total
NURS 605 Foundations for Advanced Practice	3	
NURS 606 Health Care Systems	3	
PHTX 650 Advanced Nursing Pharmacology	3	
NURS 651 Evidence Based Nursing	3	
NURS 600 Genetics	2	
NURS 653 Advanced Practice Roles	2	

PHKC 610 Introduction Health Informatics	3	
NURS 655 Pathophysiology in Clinical Decision Making*	4	
NURS 656 Advanced Clinical Assessment*	4	
NURS 657 Health Promotion and Illness Prevention Across the Lifespan	3	
NURS 698 Research Project	2	
NURS 604 Transition to Practice	1	
Total Adult CNS Core = 33 credit hours		33
Advanced Nursing Practice Component: Offered every 2 years: 2006-2007; 2008-2009; 2010-2011.		
NURS 603 Family Health	1	
NURS 622 Advanced Clinical Practice Adult CNS I	6	
NURS 623 Advanced Clinical Practice Adult CNS II	7	
Total Credit Hours		47

Oncology Clinical Nurse Specialist (includes 500 clinical hours)

Pre-requisite Course: NURS 652 Statistics (3 credit hours)		
Core Courses	Semester Hours	Total
NURS 605 Foundations for Advanced Practice	3	
NURS 606 Health Care Systems	3	
NURS 600 Genetics	2	
PHTX 650 Advanced Nursing Pharmacology	3	
NURS 651 Evidence Based Nursing	3	
PHKC 610 Introduction to Health Informatics	3	
NURS 653 Advanced Practice Roles	2	
NURS 655 Pathophysiology for Clinical Decision Making*	4	
NURS 656 Advanced Clinical Assessment*	4	
NURS 698 Research Project	2	

NURS 603 Family Health	1	
NURS 604 Transition to Practice	1	
ONC CNS core = 30 credit hours		31
Advanced Nursing Practice Component: Offered every 2 years: 2005-2006; 2007-2008; 2009-2010.		
NURS 671 Evidenced-based Cancer Treatment	3	
NURS 672 Advanced Clinical Practice I: Oncology CNS	6	
NURS 673 Advanced Clinical Practice II: Oncology CNS	7	
Total Credit Hours		47

* Basic pathophysiology knowledge and physical/health assessment skills are necessary for successful progression in Advanced Pathophysiology and Health Assessment courses. The faculty strongly recommends formal basic courses or continuing education programs in pathophysiology and physical/health assessment as pre or co-requisites to these advanced courses.

Academic Policies

Academic Progress in the Graduate Program

Satisfactory academic progress in a program involves maintaining the academic and professional standards expected in a particular discipline or program and includes demonstration of the ability to function as a professional practitioner. Failure to maintain these standards or demonstrate such abilities may result in the termination of the student's admission to the program.

Removal from Clinical Programs

A student who is unsafe in the clinical area may be asked to withdraw from the program.

Transfer of Credit

Permission for transfer of credit can only be granted by the Graduate Dean. Students who desire to transfer graduate credit from other academic institutions shall discuss this with the faculty advisor. Earned graduate credit may be transferred from institutions that offer advanced degrees. The maximum number of semester hours transferable, upon request, is six (6) hours. Up to six (6) additional hours may be requested in a master's program, provided that these additional hours are not credit earned by extension and provided that the residency requirement of 24 semester hours is maintained by the addition of transfer credits to the total program. Credit earned more than six years prior to the student's application to the Graduate School will not normally be considered for transfer.

In all cases, transfer of credit is NOT automatic. Students who want courses taken at other institutions evaluated should submit the course outline (syllabus) for the course in question to the Office of Student Services. Courses cannot be evaluated without course outlines. Course equivalency should be determined before enrollment in the course to ensure the credits will transfer. Only courses in which the student earned grades of B (3.0 on a 4.0 scale) or better will be considered for transfer. Credits which have been applied to a baccalaureate degree may not be applied to a subsequent master's degree. Six hours may be transferred from previously earned master's degree toward a second master's degree subject to the approval of the Associate Dean for Academic Affairs. Hours earned toward a project or thesis shall not be transferable to the second master's degree. If the faculty advisor agrees that the course work contributes to the Program of Study, the student may request a Transfer of Credit form from the Office of Student Services. Graduate nursing courses may be transferred as a required nursing course only if judged by the current faculty of record as equivalent to the course taught at the University of Louisville. The decision of equivalency made by the faculty of record is final.

Drop/Add Procedures

Students wishing to alter their schedule of courses in any way must make the changes with the University's Office of Registration. Failure to officially withdraw from a course may result in a grade of F and tuition charges for that course.

Students may drop/add at any time during the Early Registration period after their first scheduled time for registration. The touch-tone or online ULink systems may be used for drop/add. See the online Schedule of Courses for current instructions for Drop/Add after classes begin.

Late Complete Withdrawal after the Deadline

Students may not withdraw from any course after the published deadline in the online Schedule of Courses without the approval of the Associate Dean for Academic Affairs. This is granted only because of conditions beyond the student's control. The grade report would reflect a grade of "W".

Student Health Services Requirements

Each student must comply with the current student health policy of the Health Sciences Center. All costs associated with compliance are the responsibility of the student. Because of contractual agreements with agencies and the changing needs of society, this policy is updated periodically. The current health policies are listed below. It is the responsibility of the student to maintain his/her health in order to insure safety for other students and clients. If faculty or the agency deems that any student creates a health risk, the student may be excluded from the clinical experience and/or the program.

Individual health care facilities, used as clinical sites by the School of Nursing, may have additional requirements. In this event, the student is required to comply with any additional requirements of that facility.

Note: Health policies are constantly under review by faculty based on CDC changing requirements and community expectations. Students will be notified of any policy changes, and compliance will be required.

Clinical Requirements

Before beginning the first clinical course of the M.S.N. program, students must be in compliance with the following clinical requirements:

- submit a copy of a valid Kentucky RN license with no restrictions
- submit documentation of CPR certification (Adult, Child and Infant)
- submit proof of successful completion of UofL HIPAA Training
- submit a health screening questionnaire
- submit proof of student nurse practitioner liability insurance coverage
- submit required immunization records and proof of health insurance coverage to the Student Health Services (call 852-6446 for additional current information on requirements).

Additional information on clinical requirements is published in the Graduate Students Handbook.

Health Insurance

Students are responsible for submitting proof of health insurance. On April 26, 1999, the University of Louisville Board of Trustees approved a requirement for proof of insurance for all Health Sciences Center (HSC) students. Every HSC student will be assessed the University sponsored health insurance plan, the comprehensive plan. Students who already have health insurance that includes hospitalization coverage can waive the fee.

Health Services Fee

On April 26, 1999, the University of Louisville Board of Trustees approved a Health Services Fee. Every HSC student will be assessed the \$80 Health Services Fee each semester.

Service provided under the \$80 fee:

- All pathogen exposure (TB and needle stick) to include outside labs, x-ray, and medications
- All visits to the Student Health Services (Belknap and HSC)*
- Mental Health Services*

*Medications, lab, or x-ray costs that might be associated with these visits are not covered by the \$80 fee.

Repeating Nursing Courses

Students who receive a grade of C+ or below in a course must repeat the course. Students in the Graduate Nursing Program are allowed to repeat a required nursing curriculum course only one time. A student who receives a grade of C+ or below in a second course required in the nursing curriculum will be dismissed from the program. A Permit to Repeat Course form should be submitted to the Office of Student Services, School of Nursing, to ensure that only the last grade attempted will be included in the student's grade point average. Repeating a course is not an automatic privilege, and in most cases the student must petition to the Associate Dean and/or the Academic Affairs Committee for permission to repeat a nursing course. Once permission is granted, the student will be allowed to repeat the course on a space available basis.

Satisfactory Standing

Satisfactory standing in the nursing program is a cumulative program grade point average of at least 3.0.

Probation and Dismissal

If the cumulative grade point average falls below 3.0, the student will be placed on academic probation for the next regular semester. If the cumulative grade point average is not raised to a minimum of 3.0 by the end of the probation semester, the student will be dismissed from the program. The dismissal will be reflected on the student's transcript. If a student wishes to continue at the University, he/she must apply and be accepted to another unit in order to continue to enroll in classes.

Permission for Visiting Student Status

Students may apply for visiting student status should they wish to enroll in a nursing course at another institution while a student at U of L. If the course is being taken to apply toward the U of L degree requirements, it is the student's responsibility to check with OSS to confirm the equivalency of the course before they enroll. Students must provide OSS with the most recent copy of the course syllabus so that U of L faculty can evaluate the course for equivalency. Once the equivalency status of the course has been determined, the applying student will be sent a letter of permission for visiting student status. Students are responsible for requesting that an official transcript be sent to the University's Registrar's Office upon completion of any transfer work.

Departmental Faculty

Professors

Paulette Adams
Linda Freeman
Marianne Hutti
Mary H. Mundt, *Dean*

Kay Roberts
Karen Robinson
Robert Topp

Associate Professors

Cathy Bays
Carla Hermann
Vicki Hines-Martin
M. Cynthia Logsdon
Rosalie O. Mainous
Cynthia McCurren, *Associate Dean for Academic Affairs*
Barbara Speck

Assistant Professors

Deborah Armstrong
Elizabeth Bonham
Vicki Burns
S. Lee Ridner
Celeste Shawler
Mary Patricia Wall
Cheryl Zambroski

Emerita

Ruth B. Craddock

School of Public Health and Information Sciences

Richard D. Clover, M.D., Dean

The School of Public Health and Information Sciences offers the following degrees and certificates through the Graduate School:

Biostatistics: Decision Science - Ph.D.

Biostatistics: Decision Science – M.S.P.H.

Epidemiology: Clinical Investigation Sciences - Ph.D.

Epidemiology: Clinical Investigation Sciences – M.S.P.H.

Epidemiology: Clinical Investigation Sciences – M.Sc.

Public Health – M.P.H.

Certificate in Clinical Investigation Sciences

Doctor of Philosophy in Biostatistics: Decision Science

Major Code: PHDA

Degree Code: PHD

Unit: GH

Department Webpage: https://www.sphis.louisville.edu/bb_home.cfm

General Information

The Department of Bioinformatics and Biostatistics is dedicated to the proper application of research methods in Bioinformatics, Biostatistics, and Decision Science, and to the training of professionals in each of these areas. This mission consists of three interrelated parts: education, research, and service.

To train professionals in the theory and practice of Bioinformatics, Biostatistics, and Decision Science so that they can contribute statistical, decision-making, and other analytical expertise within academic settings, pharmaceutical companies, government agencies, and healthcare organizations.

To advance the disciplines of Bioinformatics, Biostatistics, and Decision Science by conducting pure research in these areas and by collaborating with members of the research community at the UofL Health Sciences Center.

To provide consulting services in Bioinformatics, Biostatistics, and Decision Science to the research community and the UofL Health Sciences Center.

Program Information

The Department of Bioinformatics and Biostatistics has programs for both the Master of Public Health (M.S.P.H.) and doctoral degrees (Ph.D.) in decision science and biostatistics. This Department prepares graduates for positions in academic settings, pharmaceutical companies, government agencies, and healthcare organizations.

Admission to the Degree Programs of the Department of Bioinformatics and Biostatistics requires submission of the following:

- Graduate application - see **MACROBUTTON** HtmlResAnchor <http://graduate.louisville.edu/app/>
- \$50 non-refundable application fee
- At least two letters of recommendation written within past twelve months - can be submitted with form at **MACROBUTTON** HtmlResAnchor <http://graduate.louisville.edu/app/grad-rec.pdf>
- Submission of GRE Quantitative section score to the Graduate School - no minimum score required
- Submission of all college transcripts to the Graduate School
- Statement of goals submitted to the Department office - must include desired academic and degree program

Doctor of Philosophy in Biostatistics – Decision Science with a Concentration in Decision Science

Students in this program typically come from two sources: M.S.P.H. students who are continuing into the Ph.D. program or students admitted directly to the Ph.D. program with an M.S.P.H. degree in Decision Science or comparable graduate work. Ph.D. students will develop a program of study for completing required and elective courses with their advisor and should be able to complete the requirements for a Ph.D. within 2-3 years of entry at this point, i.e. 2-3 years beyond the M.S.P.H. Students who have not taken PHDA 603 and PHDA 604 – Public Health Practicum I & II – must do so during the first year of residence in the doctoral program.

	Semester Hours
Fall One	
PHST602 Biostatistics-Decision Science Research Seminar	1
PHDA673 Biostatistics-Decision Science Research	3
PHDA690 Utility Theory and Assessment	2
Electives	6
Spring One	
PHST602 Biostatistics-Decision Science Research Seminar	1
PHST691 Bayesian Statistics	3
PHDA703 Advanced Economic Analysis in Decision Science	2
Electives (Note: PHDA673 may be taken once as an elective.)	6
Fall Two	
PHDA777 Dissertation Research	12
Spring Two	
PHDA777 Dissertation Research	12
Credit hours beyond MSPH 48 hrs	
Credit hours for MSPH 36 hrs	
Total Hours for Ph.D.	84 hrs

Note: Students may select elective courses from the following areas: biostatistics and bioinformatics, epidemiology and clinical investigation sciences, anthropology, mathematics, industrial engineering, psychological and brain sciences, electrical and computer engineering, and computer engineering and computer science. In addition, any graduate-level course in a related discipline approved by the Program Director or the stu-

dent's assigned advisor may be used to satisfy the elective requirements.

Master of Science in Public Health in Decision Science

Major Code: PHDA

Degree Code: MSPH

Unit: GH

Department Webpage: https://www.sphis.louisville.edu/bb_home.cfm

General Information

The Department of Bioinformatics and Biostatistics is dedicated to the proper application of research methods in Bioinformatics, Biostatistics, and Decision Science, and to the training of professionals in each of these areas. This mission consists of three interrelated parts: Education, Research, and Service.

To train professionals in the theory and practice of Bioinformatics, Biostatistics, and Decision Science so that they can contribute statistical, decision-making, and other analytical expertise within academic settings, pharmaceutical companies, government agencies, and healthcare organizations.

To advance the disciplines of Bioinformatics, Biostatistics, and Decision Science by conducting pure research in these areas and by collaborating with members of the research community at the UofL Health Sciences Center.

To provide consulting services in Bioinformatics, Biostatistics, and Decision Science to the research community and the UofL Health Sciences Center.

The Department of Bioinformatics and Biostatistics has programs for both the Master Science of Public Health (M.S.P.H.) and doctoral degrees (Ph.D.) in decision science and biostatistics. This Department prepares graduates for positions in academic settings, pharmaceutical companies, government agencies, and healthcare organizations.

Admission

Admission to the Degree Programs of the Department of Bioinformatics and Biostatistics requires submission of the following:

- Graduate application (see [MACROBUTTON HtmlResAnchor graduate.louisville.edu](#))
- \$50 non-refundable application fee
- At least two letters of recommendation written within past twelve months (can be submitted with form at [MACROBUTTON HtmlResAnchor http://graduate.louisville.edu/app/grad-rec.pdf](#))

- Submission of GRE Quantitative section score to the Graduate School (no minimum score required)
- Submission of all college transcripts to the Graduate School
- Statement of goals submitted to the Department office (Must include desired academic and degree program)

Curriculum

The presented sequence of courses reflects the required program of study for a student in the Decision Science concentration and is based upon approximately nine (9) hours of course work in the fall and spring semesters and six (6) hours in the first summer .

SUMMER ONE:

- PHDA 601 INTRO TO MEDICAL DECISION ANALYSIS (2)
- PHDA 660 MATH TOOLS (4)

FALL ONE:

- PHST 602 RESEARCH SEMINAR (1)
- PHDA 603 P.H. PRACTICUM I (1)
- PHEP 511 INTRO TO EPI (3) / PHCI 611 INTRO EPI (2)
- PHST 661 PROBABILITY (3)
- ELECTIVE(S)

SPRING ONE:

- PHST 602 RESEARCH SEMINAR (1)
- PHDA 604 PUBLIC HEALTH PRACTICUM II (1)
- PHST 662 MATH STATISTICS (3)
- ELECTIVE(S)

FALL TWO:

- PHST 602 RESEARCH SEMINAR (1)
- PHCI 631 SOC/BEH SCIENCES IN HEALTH CARE (2)
- PHCI 662 HEALTH CARE ECONOMICS (2)
- PHDA/IE 643 DECISION ANALYSIS (3)
- ELECTIVE

SPRING TWO:

- PHST 602 RESEARCH SEMINAR (1)
- PHDA 605 ETHICAL ISSUES IN DECISION MAK (2)
- PHDA 666 MASTERS THESIS RESEARCH (1-6)
- ELECTIVE(S)

Note: Students may select elective courses from the following areas: biostatistics and bioinformatics, epidemiology and clinical investigation sciences, anthropology, mathematics, industrial engineering, psychological and brain sciences, electrical and computer engineering, and computer engineering and computer science. In addition, any graduate-level course in a related discipline approved by the Program Director or the student's assigned advisor may be used to satisfy the elective requirements.

Doctor of Philosophy in Epidemiology: Clinical Investigation Sciences

Major Code: ECIS

Degree Code: PHD

Unit: GH

Department Webpage: <http://sphs.louisville.edu/academics.cfm>

General Information

The mission of the program is to prepare students for a career in patient oriented research.

The curriculum enables students to concentrate in either translational research (e.g., drug/device development) or health services and outcomes research. A guiding principle that informed the development of the doctoral program of study was that students should learn the essential “technical” aspects of clinical research in the Master’s program and then, in the doctoral course work, the more advanced and specialized transdisciplinary substantive knowledge (i.e., pharmacology-molecular biology-genetics pertaining to drug/device development) necessary to ask and answer “cutting edge” questions in their dissertation and in their future work as clinical research scientists.

Admission Procedures

Students completing the required course work for the MSc degree or equivalent degree may apply for admission into the doctoral program. A terminal degree in a health field, or a graduate degree with appropriate experience in health care or clinical research is preferred.

Applicants must complete all forms for admission to the University of Louisville Graduate School and must meet the Graduate School’s requirements for admission which are:

- Formal application
- Application fee
- At least 2 letters of recommendation
- Official transcripts of all college work

The GRE is not required if a terminal degree has already been completed and the GRE is waived by the Graduate School.

These items are required no later than thirty days before the first day of classes of the semester in which the applicant plans to enroll.

Prospective students are also required to submit the following items with their application:

- Resume/CV
- A statement describing the applicant’s qualifications, including prior experience in clinical research or health care, proposed (general) area of research and career plans.

Translational Research Concentration

Students who focus on the area of translational research will study the development and testing of new pharmaceutical agents and biomechanical devices (i.e., the historical definition of clinical research). They will be trained to become research scientists capable of participating in all phases of the development and testing of new investigational drugs and biomedical devices. They will be able to identify promising new chemical compounds or devices, conduct initial tests for safety, seek FDA approval for clinical use, conduct Phase IV clinical trials of health outcomes, and establish “clinical guidelines” for their use in practice. The Translational Research curriculum consists of 20 hours of required courses, 10 hours of elective courses, and 18 hours of dissertation research beyond the Master’s. It is expected that a significant portion of elective courses will be in independent study or seminar hours in a discipline related to the student’s research interests and that these courses will include significant research experiences.

Curriculum

Schedule of Courses for the Ph.D. Degree in Epidemiology: Clinical Investigation Sciences - Translational Research Concentration

Year 1

Fall Semester

- BIOC 641- Advanced Eukaryotic Genetics (4)
- PHCI 633 – Legal Aspects of Biomedical, Behavioral & Public Health Research (2)
- PHCI 799 – Dissertation Research (2)
- Electives* - (4)

Spring Semester

- PHAR 601 – Principles of Medical Pharmacology (7)
- PHCI 799 – Dissertation Research (2)

Year 2

Summer Semester

- PHCI 799 – Dissertation Research (6)

Fall Semester

- PHCI 626 – Clinical Trials III: Organization and Management (4)
- PHAR 660 – Principles of Drug and Chemical Action (3)
- PHCI 799 – Dissertation Research (2)
- Electives* - (3)

Spring Semester

- PHCI 799 – Dissertation Research (6)
- Electives* (3)

*Elective courses are to be taken from the basic biomedical sciences at the 600 level and above. Independent study courses that involve a research experience are strongly recommended.

Health Services and Outcomes Research Concentration

Students pursuing the health services and outcomes research concentration will be trained to conduct patient oriented, population based clinical research, to assess the effectiveness and efficacy of alternative health service delivery systems or treatment modalities and to design and/or evaluate Federal and State health programs to improve the health status of specific populations. Because of the broad array of foci in health services and outcomes research, the curriculum for this concentration is designed with maximum flexibility in mind. The curriculum consists of 18 credit hours of required course work and 12 credit hours of electives beyond the Masters. Students will select, with the approval of their faculty advisor, elective course work from among the graduate level courses offered within the clinical research program or from relevant health related courses offered in other departments of the University. It is expected that a significant portion of elective hours will be in independent study or seminar hours in a discipline related to the student's research interests and that these courses will include significant research experiences.

Curriculum

Schedule of Courses for the Ph.D. Degree in Epidemiology: Clinical Investigation Sciences - Health Services and Outcomes Research Concentration

Year 1

Fall Semester

- PHCI 603 – Program Evaluation (2)
- HADM 620 – Introduction to the Business of Health Care Systems (3)
- PHCI 671 – Preventive Medicine I: Community Health (2)
- PHCI 799 – Dissertation Research (2)
- Electives* (3)

Spring Semester

- PHCI 604 – Quality Assessment in Health Care (2)
- PHCI 605 – Survey Research Methods (2)
- PHCI 672 – Preventive Medicine II: Individual Health Assessment and Risk Factor Modification (2)

Select 1 of the following:

- PHCI 613 – Epidemiology of Cancer (1)
- PHCI 612 – Epidemiology of Cardiovascular Disease (1)
- PHCI 614 – Epidemiology of Infectious Diseases (1)
- PHCI 799 – Dissertation Research (2)
- Electives* (3)

Year 2

Summer Semester

- PHCI 799 – Dissertation Research (6)

Fall Semester

Select 2 of the following:

- PHCI 642 – Programs and Research in Maternal and Child Health (1)
- PHCI 643 – Programs and Research in Adult Health (1)
- PHCI 644 – Programs and Research in Geriatric Health (1)
- PHCI 645 – Programs and Research in Women's Health (1)
- PHCI 646 – Programs and Research in Minority Health (1)
- PHCI 647 – Programs and Research in Urban Health (1)
- PHCI 799 – Dissertation Research (4)
- Electives* (6)

Spring Semester

Select 2 of the following:

- PHCI 642 – Programs and Research in Maternal and Child Health (1)
- PHCI 643 – Programs and Research in Adult Health (1)
- PHCI 644 – Programs and Research in Geriatric Health (1)
- PHCI 645 – Programs and Research in Women's Health (1)
- PHCI 646 – Programs and Research in Minority Health (1)
- PHCI 647 – Programs and Research in Urban Health (1)
- PHCI 799 – Dissertation Research (4)

*Elective courses should be approved departmentally. The student is advised to select elective courses that will expand his/her research skills and experience.

Master of Science in Epidemiology: Clinical Investigation Sciences

Major Code: ECIS

Degree Code: MSC

Unit: GH

Department Webpage: <http://sphs.louisville.edu/academics.cfm>

General Information

The School of Public Health and Information Sciences offers the Clinical Research, Epidemiology and Statistics Training (CREST) Program. This two-tiered program consists of a Graduate Certificate in Clinical Investigation Sciences and a M.Sc. degree. The M.Sc. can be pursued jointly with the M.D. degree. The Graduate Certificate in Clinical Investigation Sciences provides individuals with skills required for a career in a clinical research setting. The M.Sc. degree program provides physicians, dentists, nurses, and other health professionals an opportunity to acquire the clinical research skills necessary for

a career in an academic health center. The CREST curriculum integrates biostatistical and epidemiologic methods in a problem-based learning format with additional instruction in bioethics, health economics, health services and outcomes research and social and behavioral science. Students pursuing the master's degree take didactic courses while they engage in mentored and independent research that culminates in the preparation of a professional paper or research thesis.

The mission of the program is to equip students with the skills needed for independent clinical research.

Objectives of the program are to identify a research question, operationalize a hypothesis, formulate a study protocol, determine the necessary sample size for acceptable statistical power, select the appropriate statistical analysis techniques and be sufficiently familiar with SPSS and/or SAS to perform the statistical analysis (in consultation with a biostatistician), write their results for presentation and publication and prepare a grant application.

Admission Procedures

Students seeking the Certificate should have an undergraduate degree in a health field, or a graduate degree with appropriate experience in health care or clinical research.

Applicants must complete all forms for admission to the University of Louisville Graduate School and must meet the Graduate School's requirements for admission which are:

- Formal application
- Application fee
- At least 2 letters of recommendation
- Official transcripts of all college work

The GRE is not required if a terminal degree has been received and the GRE is waived by the Graduate School.

These items are required no later than thirty days before the first day of classes of the semester in which the applicant plans to enroll.

Prospective students are also required to submit the following items with their application:

- Resume/CV
- A statement describing the applicant's qualifications, including prior experience in clinical research or health care, proposed (general) area of research and career plans.

Curriculum

Schedule of Courses for the M.Sc. Degree in Epidemiology: Clinical Investigation Sciences

Two Year Master of Science Option

Year 1

Summer Semester

- PHCI 501 – From Bench to Bedside: Introduction to Clinical Research (1)

Fall Semester

- PHCI 611 - Introduction to Clinical Epidemiology (2)
- PHCI 621 - Fundamentals of Biostatistics (2)
- PHCI 631 – Social and Behavioral Science in Health Care (2)
- PHCI 610 – New Drug and Device Development (2)
- PHCI 699 Mentored Research (0-1)

Spring Semester

- PHCI 622 - Design and Analysis of Case-Control Studies (2)
- PHCI 623 - Design and Analysis of Cohort Studies (2)
- PHCI 624 – Clinical Trials I (2)
- PHCI 632 – Ethical Conduct of Health Care Research (2)
- PHCI 699 Mentored Research (0-1)

Year 2

Summer Semester

PHCI 601 - Evaluating the Health Care Literature (1)

- PHCI 699 Mentored Research (0-1)

Fall Semester Year

- PHCI 625 – Clinical Trials II (2)
- PHCI 650 – Medical Decision Analysis (2)
- PHCI 602 – Health Services and Outcomes Research (2)
- PHCI 699 Mentored Research (0-1)

Spring Semester

- PHCI 699 – Mentored Research (2-6)

A total of 6 credit hours of Mentored (Thesis) Research is required. Students are encouraged to take at least one credit hour in each semester with the most in their final semester, as appropriate to their research.

Three Year Master of Science Option

Year 1

Fall Semester

- PHCI 611 – Introduction to Clinical Epidemiology (2)
- PHCI 621 – Fundamentals of Biostatistics (2)

Spring Semester

- PHCI 623 - Design & Analysis of Cohort Studies (2)
- PHCI 622 – Design & Analysis of Case Control Studies (2)
- or PHCI 624 – Clinical Trials I (2)

Year 2

Summer Semester

- PHCI 501 – From Bench to Bedside: Introduction to Clinical Research (1)

Fall Semester

- PHCI 610 – New Drug and Device Development (2)
- PHCI 631 – Social and Behavioral Science in Health Care (2)
- PHCI 699 – Mentored Research (0-1)

Spring Semester

- PHCI 632 – Ethical Conduct of Health Care Research (2)
- PHCI 624 – Clinical Trials I (2)

OR

- PHCI 622 – Design & Analysis of Case Control Studies (2)
- PHCI 699 – Mentored Research (0-1)

Year 3

Summer Semester

- PHCI 601 – Evaluating Health Care Literature (1)
- PHCI 699 – Mentored Research (0-1)

Fall Semester

- PHCI 625 – Clinical Trials II (2)
- PHCI 650 – Medical Decision Analysis (2)
- PHCI 602 – Health Services and Outcomes Research (2)
- PHCI 699 – Mentored Research (0-1)

Spring Semester

- PHCI 699 – Mentored Research (2-6)

A total of 6 credit hours of Mentored (Thesis) Research is required. Students are encouraged to take at least one credit hour in each semester with the most in their final semester, as appropriate to their research.

Total Credit Hours = 30

Joint M.D. and Master of Science in Epidemiology: Clinical Investigation Sciences

General Information

Students admitted to the University of Louisville School of Medicine can pursue a joint M.D.-M.Sc. degree program with only one additional year of study beyond the traditional four-year medical school curriculum. Medical students pursuing

the joint M.D.-M.Sc. degree begin the M.Sc. course work after completing one-year of clinical training (i.e., the third year of medical school). Joint degree students spend the Fall and Spring semesters of their fourth year and the Summer and Fall semesters of their fifth year completing the M.Sc. course work. They complete their professional paper/thesis for the M.Sc. degree and their clinical rotations for the M.D. degree in the Spring semester of their fifth year. Graduates of the program can expect to be highly competitive for residency and fellowship positions at prestigious institutions.

Admissions Procedures

Students seeking the M.D./M.Sc. degree must have been accepted to the University of Louisville Medical School and generally apply to Graduate School during their M-3 year. See the admissions requirements outlined above for the M.Sc.

Schedule of Courses for the Joint M.D. and Master of Science in Epidemiology: Clinical Investigation Sciences

M.D.-M.Sc. Option:

M4 Year, Fall/Summer Semester Graduate School

Choice of 3, all 4 weeks, 5 credits each

- In-Patient Medicine (IPM)
- AHEC
- Neurology
- In-Patient Surgery (IPS)
- Ambulatory Care (AR)
- Ambulatory Primary Care (APC)

AND REQUIRED

- Anesthesiology, 2 weeks, 2 credits

M4 Year Fall/Fall Semester Graduate School

- PHCI 611 - Introduction to Clinical Epidemiology (2)
- PHCI 621 – Fundamentals of Biostatistics (2)
- PHCI 631 – Social and Behavioral Science in Health Care (2)
- PHCI 610 – New Drug and Device Development (2)

M4 Year, Spring/Spring Semester Graduate School

Clinical Electives (2-10 credits). Need to take a minimum of 2 credits.

- PHCI 622 - Design and Analysis of Case Control Studies (2)
- PHCI 623 – Design and Analysis of Cohort Studies (2)
- PHCI 624 – Clinical Trials I (2)
- PHCI 632 – Ethical Conduct of Health Care Research (2)

M5 Year, Fall/Summer Semester Graduate School

- PHCI 601 – Evaluating Health Care Literature (1)
- PHCI 501 – From Bench to Bedside: Introduction to Clinical Research (1)

M5 Year, Fall/Fall Semester Graduate School

- PHCI 625 – Clinical Trials II (2)
- PHCI 650 – Medical Decision Analysis (2)
- PHCI 602 – Health Services and Outcomes Research (2)
- PHCI 699 – Mentored Research (6 credits)**

**The student has the choice of when to take these hours based on what financial assistance they want to receive. Options 1) take all in the Fall semester 2) take all in the Spring semester or 3) split the hours up between semesters. If all hours are taken in the Fall semester the student must register for master's candidacy in the Spring.

M5 Year, Spring/Spring Semester Graduate School

Choice of 3 and remaining electives, all 4 weeks, 5 credits each

- In-Patient Medicine (IPM)
- AHEC
- Neurology
- In-Patient Surgery (IPS)
- Ambulatory Care (AR)
- Ambulatory Primary Care (APC)

MSC Courses - See above**

USMLE Step 2 exam must be scheduled no later than block 8 of the M5 year.

Graduate Certificate in Clinical Investigation Sciences

Major Code: PH

Degree Code: CCI

Unit: GH

Department Webpage: <http://sphs.louisville.edu/academics.cfm>

General Information

The Graduate Certificate in Clinical Investigation Sciences includes 15 credit hours of didactic instruction with required courses in epidemiology, biostatistics, the responsible conduct of research, evaluating the health care literature and an elective in behavioral and social science, health economics or health services and outcomes research plus a 1 credit hour research paper. The Certificate Program can be completed in 1 year and is designed for those who want a career in a clinical research setting as well as those who want to upgrade their research skills. Courses taken in the certificate program may be applied toward the M.Sc.

The mission of the program is to cover the core material for personnel in the clinical research infrastructure.

The objective of the program is to train research associates, study coordinators, and the research coordinators for residency and fellowship programs to assist faculty, fellows and residents with the design of a research project, insuring human subject protection, and basic quantitative analysis of data. The Certificate is also a mechanism for experienced clinical researchers and mid to senior level faculty to upgrade their skills in the clinical investigation sciences.

Admission Procedures

Students seeking the Certificate should have an undergraduate degree in a health field, or a graduate degree with appropriate experience in health care or clinical research.

Applicants must complete all forms for admission to the University of Louisville Graduate School and must meet the Graduate School's requirements for admission which are:

- Formal application
- Application fee
- At least 2 letters of recommendation
- Official transcripts of all college work

The GRE may be waived, if approved by the Graduate School.

These items are required no later than thirty days before the first day of classes of the semester in which the applicant plans to enroll.

Prospective students are also required to submit the following items with their application:

- Resume/CV
- A statement describing the applicant's qualifications, including prior experience in clinical research or health care, proposed (general) area of research and career plans.

Curriculum

Schedule of Courses for the Certificate in Clinical Investigation Sciences

Fall Semester

- PHCI 611- Introduction to Clinical Epidemiology (2)
- PHCI 621 - Fundamentals of Biostatistics (2)

Elective Courses (Select One)

- PHCI 631 - Behavioral and Social Science in Health Care (2)
- PHCI 662 - Health Economics (2) OR
- PHCI 650 - Medical Decision Analysis (2)
- PHCI 602 - Health Services and Outcomes Research (2)

Spring Semester

- PHCI 622 - Design and Analysis of Case Control Studies (2)
- PHCI 623 - Design and Analysis of Cohort Studies (2)
- PHCI 624 - Clinical Trials I (2)
- PHCI 632 - Ethical Conduct of Health Research (2)

Summer Semester

- PHCI 601 - Evaluating Health Care Literature (1)
- PHCI 699 – Mentored Research Paper (1)

Master in Public Health

Major Code: PH

Degree Code: MPH

Unit: GH

Department Webpage: <http://sphs.louisville.edu/MPH/index.htm?>

General Information

This program is designed as a full or part-time day curriculum. Students, during the Spring semester of the first year, will seek admission into the concentration of their choosing, based upon their intended public health focus. Departmental admissions are based upon admission criteria determined by individual departments.

Requirements to be awarded the degree of Master of Public Health (M.P.H.) are the successful completion of 45 credits of study, distributed as follows:

- General public health courses (18 credits)
- Public health concentration field courses (12 credits)
- Public health practicum (6 credits)
- Issues in public health (8 credits)
- Integrating learning and experience in public health (1 credit)

All general courses must be completed prior to taking Concentration courses, the practicum or the integration class. A student must declare a Concentration field prior to the end of the general courses. It is anticipated that the typical student will complete his or her requirements over a two-year period with full-time course work.

There are 6 general courses in the following subjects:

- Biostatistics (2 3-credit courses)
- Environmental and occupational health (1 3-credit course)
- Epidemiology (1 3-credit course)
- Health behavior (1 3-credit course)
- Health management (1 3-credit course)

The five fields of study from which a student may develop a Concentration are as follows, along with the department offering the Concentration:

- Biostatistics (Dept. of Bioinformatics and Biostatistics)
- Environmental and occupational health (Dept. of Environmental and Occupational Health Sciences)
- Epidemiology (Dept. of Epidemiology and Clinical Investigation Sciences)

- Health behavior (Dept. of Health Knowledge and Cognitive Sciences)
- Health management (Dept. of Health Management and Systems Sciences)

Depending on the Concentration, the practicum may be taken in one semester or in two semesters. The practicum places the student in a non-academic organization providing services in or closely related to the public health Concentration selected by the student.

The 4 courses in issues in public health are typically taken each semester for two years. The one course of integrating learning and experience in public health is taken during the last semester of the second year.

The M.P.H. Program is designed to prepare students for the practice of public health for today and the future. The program emphasizes knowledge and skill acquisition, community experience and collaborative activities. With supervision by the faculty, students are responsible for arranging many of their own learning experiences, including their practica, portfolios and community projects. The program aims to have graduates ready to assume existing public health roles and to grow into new roles as needs emerge.

Admissions Procedures

- A bachelor's degree from an accredited institution or its equivalent.
- A recommended minimum GPA of 3.0 on a 4.0 scale.
- If applicable, Test of English as a Foreign Language (TOEFL) exam with a minimum score of 250 on the computer-based version OR a minimum score of 600 on the paper-based version.

Curriculum

Schedule of Courses for the Master in Public Health (M.P.H.)

Year 1 Fall Semester

- PHEP 511 - Introduction to Epidemiology (3 credits)
- PHST 600 - Introduction to Biostatistics I (3 credits)
- PHMS 601 - Introduction to Public Health Practice and Administration (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)

Year 1 Spring Semester

- PHEH 600 - Introduction to Environmental Health Sciences (3 credits)
- PHKC 601 - Introduction to Health Behavior (3 credits)
- PHST 610 - Introduction to Biostatistics II--Statistical Computing & Data Management for Public Health (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)

Year 1 Summer Semester

- Departmental Concentration course(s) (for some Concentrations; will be determined by department)

Year 2 Fall Semester

- Departmental Concentration course(s) (9 credits)

OR

- Departmental Concentration courses (6 credits)
- Departmental-specific Public Health Practicum (3 credits)

OR

- Departmental Concentration courses (3 credits)
- Departmental-specific Public Health Practicum (6 credits)
- PHKC 696 - Issues in Public Health (2 credits)

Year 2 Spring Semester

- Departmental Concentration course(s) (9 credits)

OR

- Departmental Concentration courses (6 credits)
- Departmental-specific Public Health Practicum (3 credits)

OR

- Departmental Concentration courses (3 credits)
- Departmental-specific Public Health Practicum (6 credits)
- PHKC 696 - Issues in Public Health (2 credits)
- PHKC 697 - Integrating Learning and Experience in Public Health (1 credit)

Total Program Credits = 45

Course of Study for the M.P.H. Degree with a Concentration in Biostatistics

Year 1 Fall Semester

- PHEP 511 - Introduction to Epidemiology (3 credits)
- PHST 600 - Introduction to Biostatistics I (3 credits)
- PHMS 601 - Introduction to Public Health Practice and Administration (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)

Year 1 Spring Semester

- PHEH 600 - Introduction to Environmental Health Sciences (3 credits)
- PHKC 601 - Introduction to Health Behavior (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)

Year 2 Fall Semester

- PHEH 610 - Occupational Health and Safety (3 credits)
- PHEH 650 - Advanced Topics in Environmental Health (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)
- Elective course (3 credits)

Students can select from any area they are interested in. Courses will vary; require prior approval from the Department Chair.

Year 2 Spring Semester

- PHEH 620 - Global Issues on Environmental and Occupational Health (3 credits)
- PHEH 679 - Public Health Practicum (6 credits)
- PHKC 696 - Issues in Public Health (2 credits)
- PHKC 697 - Integrating Learning and Experience in Public Health (1 credit)

Total Program Credits = 45

Course of Study for the M.P.H. Degree with a Concentration in Epidemiology

Year 1 Fall Semester

- PHEP 511 - Introduction to Epidemiology (3 credits)
- PHST 600 - Introduction to Biostatistics I (3 credits)
- PHMS 601 - Introduction to Public Health Practice and Administration (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)

Year 1 Spring Semester

- PHEH 600 - Introduction to Environmental Health Sciences (3 credits)
- PHKC 601 - Introduction to Health Behavior (3 credits)
- PHST 610 - Introduction to Biostatistics II--Statistical Computing & Data Management for Public Health (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)

Year 1 Summer Semester

Elective(s) A total of 9 credit hours are needed.

- PHEP 650 - Advanced Topics in Epidemiology (3 – 6 credits)

Year 2 Fall Semester

- PHEP 602 - Epidemiologic Methods (2 credits)
- PHEP 603 - Research in Epidemiologic Methods (1 credit)
- PHEP 679 - Public Health Practicum (3 or 6 credits)
- PHKC 696 - Issues in Public Health (2 credits)

Electives:

- PHEP 604 - Epidemiology of Infectious Disease (2 credits)
- PHEP 605 - Research in Epidemiology of Infectious Disease (1 credit)
- PHEP 606 - Genetic and Molecular Epidemiology (3 credits)
- PHEP 607 - Epidemiology of Cancer (2 credits)
- PHEP 608 - Research in Epidemiology of Cancer (1 credit)
- PHEP 650 - Advanced Topics in Epidemiology (3 - 6 credits)

Year 2 Spring Semester

- PHEP 679 - Public Health Practicum (3 or 6 credits)
- PHKC 696 - Issues in Public Health (2 credits)
- PHKC 697 - Integrating Learning and Experience in Public Health (1 credit)

Electives:

- PHEP 609 - Epidemiology of Cardiovascular Disease (2 credits)
- PHEP 610 - Research in Epidemiology of Cardiovascular Disease (1 credit)
- PHEP 611 - Nutritional Epidemiology (3 credits)
- PHEP 612 - Epidemiology and Bioterrorism (3 credits)
- PHEP 613 - Epidemiology of Aging (2 credits)
- PHEP 614 - Research in Epidemiology of Aging (1 credit)
- PHEP 615 - Epidemiology of Maternal and Child Health (3 credits)
- PHEP 650 - Advanced Topics in Epidemiology (3 – 6 credits)

Total Program Credits = 45

Course of Study for the M.P.H. Degree with a Concentration in Health Behavior and Cognition

Year 1 Fall Semester

- PHEP 511 - Introduction to Epidemiology (3 credits)
- PHST 600 - Introduction to Biostatistics I (3 credits)
- PHMS 601 - Introduction to Public Health Practice and Administration (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)

Year 1 Spring Semester

- PHEH 600 - Introduction to Environmental Health Sciences (3 credits)
- PHKC 601 - Introduction to Health Behavior (3 credits)
- PHST 610 - Introduction to Biostatistics II--Statistical Computing & Data Management for Public Health (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)

Year 2 Fall Semester

- PHKC 602 - Cognitive Issues in Health Communication (3 credits)
- PHKC 604 - Health Decision and Risk Analysis (3 credits)
- PHKC 679 - Public Health Practicum (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)

Year 2 Spring Semester

- PHKC 606 - Health Knowledge Diffusion (3 credits)
- PHKC 607 - Population Health Management* (3 credits)
*cross-listed with PHMS 607
- PHKC 679 - Public Health Practicum (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)
- PHKC 697 - Integrating Learning and Experience in Public Health (1 credit)

Total Program Credits = 45

Course of Study for the M.P.H. Degree with a Concentration in Health Management

Year 1 Fall Semester

- PHEP 511 - Introduction to Epidemiology (3 credits)
- PHST 600 - Introduction to Biostatistics I (3 credits)
- PHMS 601 - Introduction to Public Health Practice and Administration (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)

Year 1 Spring Semester

- PHEH 600 - Introduction to Environmental Health Sciences (3 credits)
- PHKC 601 - Introduction to Health Behavior (3 credits)
- PHST 610 - Introduction to Biostatistics II--Statistical Computing & Data Management for Public Health (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)

Year 2 Fall Semester

- PHMS 615 - Introduction to Health Systems (3 credits)
- PHMS 603 - Legal & Bioethical Aspects of Public Health (3 credits)
- PHMS 679 - Public Health Practicum (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)

Year 2 Spring Semester

- PHMS 605 - Governance and Management of Healthcare Organizations (3 credits)
- PHMS 607 - Population Health Management* (3 credits)
*cross listed with PHKC
- PHMS 679 - Public Health Practicum (3 credits)
- PHKC 696 - Issues in Public Health (2 credits)
- PHKC 697 - Integrating Learning and Experience in Public Health (1 credit)

Total Program Credits = 45

Faculty

Professors

- Ronald Atlas, *Dean of the Graduate School*
 Richard Baumgartner
 Somnath Datta
 Stanley Gall
 Carlton Hornung
 Robert Jacobs
 Rudolph S. Parrish, *Chair*, Department of Bioinformatics and Biostatistics
 W. Paul McKinney, *Acting Chair*, Department of Epidemiology and Clinical Investigational Sciences
 Prasaad Steiner
 David J. Tollerud, M.D., *Chair*, Department of Environmental and Occupational Health Sciences
 Richard Wilson, DHSc, *Acting Chair*, Department of Health Knowledge and Cognitive Sciences

Associate Professors

Kathy Baumgartner
 Susmita Datta
 Robert J. Esterhay, *Chair*, Department of Health Management
 and Systems Sciences
 L. Jane Goldsmith
 Caryn Thompson
 Adewale Troutman

Assistant Professors

Ray Austin
 Guy Brock
 Ruth Carrico
 Frank Groves
 Murriel Harris
 A. Scott LaJoie
 Steve McCabe
 Susan Muldoon
 Irma Ramos
 Jae Yoo
 Barry Wainscott
 Chenxi Wang
 Qunwei Zhang

Adjunct Appointments

Timothy Aldrich
 Larry Lewis

Gratis Appointments

Terry Altpeter
 Shelia Anderson
 Kraig Humbaugh
 David Potash
 Robert Slaton
 James Taylor
 Cathy Whalen

Associate Appointments

LeRoy Furr
 Jennifer Gregg
 Carol Hanchette
 Joy Hart
 Susan Kelly
 Damian Laber
 Larry Palmer
 Mark Rothstein
 Jamie Studts
 T. Howard Stone
 Ann Swank
 Judith Wulff
 Matthew Zahn

Speed School of Engineering

Mickey R. Wilhelm, Ph.D., Dean

The Speed School of Engineering offers the following M.Eng. degree programs and the following Masters of Science and Doctoral degree programs through the Graduate School:

Bioengineering – M.Eng.
 Chemical Engineering - Ph.D.
 Chemical Engineering – M.S.
 Chemical Engineering - M.Eng.
 Civil Engineering - Ph.D.
 Civil Engineering – M.S.
 Civil Engineering - M.Eng.
 Computer Engineering Computer Science – M.Eng.
 Computer Science – M.S.
 Computer Science and Engineering - Ph.D.
 Electrical Engineering - Ph.D.
 Electrical Engineering – M.S.
 Electrical Engineering - M.Eng.
 Engineering Management – M.Eng.
 Environmental Engineering - C
 Industrial Engineering - Ph.D.
 Industrial Engineering – M.S.
 Industrial Engineering - M.Eng.
 Mechanical Engineering - Ph.D.
 Mechanical Engineering – M.S.
 Mechanical Engineering - M.Eng.

Master of Engineering in Bioengineering

Major Code: BE
 Degree Code: MEN
 Unit: SP
 Department Webpage: <http://www.louisville.edu/speed/bioengineering/>

General Information

The Master of Engineering with specialization in Bioengineering (M.Eng. BE) is an integrated five-year degree program that includes a year of cooperative education experience. The first four (4) years of the program leads to a Bachelor of Science degree in Bioengineering which is described in the University's Undergraduate Catalog.

Admission Requirements

Requirements for admission or readmission include:

1. Completion of a program of studies equivalent to that obtained through the Division of Pre-Engineering and Basic Studies for the field of Bioengineering; this includes one calendar year of cooperative education, or the equivalent in full-time employment, within the biomedical or bioengineering device or process industries.
2. Recommendations by the faculty and chair of the Department of Bioengineering for admission or readmission to the Division of Higher Studies.
3. A cumulative baccalaureate program grade-point average of 3.00/4.00 for unconditional acceptance. However, those students with cumulative baccalaureate GPAs of 2.5-3.0 may be admitted on a provisional basis by submitting a formal petition to the faculty of the Bioengineering Department.
4. Applications for admission to the M.Eng. BE degree program should be submitted directly to the Admissions Office of the JB Speed School of Engineering rather than the Graduate School.

Prerequisite Requirements

Since the M.Eng. BE is part of a five-year program, the requirements stipulated in item (1) above in the Admission Requirements section must be completely and precisely satisfied. Typically, this is very difficult for students who have not matriculated through the preceding four years at the Speed School, but each student will be evaluated on a case-by-case basis.

Degree Requirements

Upon entering the Professional School, the student chooses an area of concentration for the master's thesis and selects a sequence of program elective courses for the thesis concentration (list of courses available in the Department of Bioengineering). The M.Eng. BE degree requires the following over and above the Bachelor of Bioengineering Degree Code:

	Semester Hours	Total
Higher Studies Division BE 621, 691; ME 637; PHCI 621; XXX ¹ , XXX ¹ , XXX ¹ , XXX ¹ , XXX ¹	27	
Thesis ²	6	
Minimum Total		33 ³

¹ A student specializing in BE is required to select five approved electives (500 or 600 Level) totaling at least 15 semester hours. By proper choice of these electives, a student may develop specific strengths in areas such as bioelectronics, biomedical devices, bioinformatics, bioimaging, biomechanics, rehabilitation engineering, molecular engineering, cellular engineering or tissue engineering. However, depending on faculty availability and other departmental needs, sufficient courses may not be offered in any one or two year period to allow a student to specialize in some of these areas. Therefore, these electives need not necessarily be BE courses, but the student's research advisor and academic advisor must approve non-Bioengineering courses from a list of appropriate engineering design and engineering science courses available in the BE Department.

² A full-time student is required to have selected both an approved M.Eng. thesis topic and the director and members of the thesis committee during the first term of the graduate/professional year. Six (6) semester hours of BE 697 are required to satisfy the minimum M.Eng. thesis requirements.

³ The five-year total for the M.Eng. degree in Bioengineering is 171 semester hours.

Departmental Faculty

Professors

George Pantalos, *Joint Appointment with Department of Surgery*

Associate Professors

Robert S. Keynton, *Chair*

Steven C. Koenig, *Joint Appointment with Department of Surgery*

Assistant Professors

Andrea S. Gobin

Aoy Tomita-Mitchell

Palaniappan Sethu

Guruprasad A. Giridharan

Doctor of Philosophy in Chemical Engineering

Major Code: CHE
Degree Code: PHD
Unit: GS
Department Webpage: <http://www.louisville.edu/speed/chemical>

General Information

The mission of the Ph.D. program in chemical engineering is to develop graduates, who are academically prepared for the broad profession of Chemical Engineering, which is increasingly complex, diverse and changing. This is to be accomplished through educational programs and the pursuit of scholarship and research. The department is committed to fulfilling its role in the urban mission of the University of Louisville.

This degree program is intended for persons having an accredited masters and/or baccalaureate degree in chemical engineering, but is available to those with other backgrounds. Applicants with other backgrounds should plan on taking some undergraduate background course work. Students interested in the Ph.D. degree program should consult the Graduate Student Advisor in the Department of Chemical Engineering.

Program Admission Procedure

The admission requirements for the Ph.D. program are essentially the same as those of the Graduate School. For unconditional admission, a minimum score of 1100 (Verbal and Quantitative) on the GRE and a minimum 3.0 on a 4.0 scale undergraduate GPA is expected. Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background in chemical engineering, e.g., B.S. Chemists, Biologists (approximately one year of undergraduate courses may be required).

International applicants are required to take the TOEFL examination if English is not the native language. Applicants who have not scored 550 or higher on the TOEFL may choose to apply to the Intensive English as a Second Language (IESL) Program. Successful completion of this program or passing the Exit Examination in the advanced level of IESL will be considered adequate proof of the English proficiency required for course work in the Ph.D. program. Acceptance to the Intensive English Program does not constitute acceptance to the Ph.D. program. For information and application forms, write to IESL, University of Louisville, Louisville, KY 40292.

Program Curriculum Requirements

The general requirements of the Doctor of Philosophy program are the same as those of the Graduate School. Other specific guidelines for the Ph.D. degree in chemical engineering are these:

Minimum course hours beyond baccalaureate degree in Chemical Engineering – 30 Semester Hrs.

	Semester Hours	Total
CHE610, Advanced Thermodynamics	3	
CHE620, Transport Phenomena	3	
CHE641, Advanced Reactor Design	3	
CHE686, Chemical Engineering Analysis	3	
CHE695, Chemical Engineering Seminar	4	
Other 500-600 level courses (at least one course outside CHE)	18	
CHE693, Research in Chemical Engineering	36	
Total Credit Hours		70

Master of Science in Chemical Engineering

Major Code: CHE
Degree Code: MS
Unit: GS
Department Webpage: <http://www.louisville.edu/speed/chemical>

Program Information

This degree program is intended for persons having an accredited baccalaureate degree in chemical engineering, but is available to those with other backgrounds. Applicants with other backgrounds should plan on taking some undergraduate background course work. Students interested in the M.S. degree program should consult the Graduate Student Advisor in the Department of Chemical Engineering.

Non-Thesis Option

In general, the non thesis alternative makes graduate study more attractive to students who wish to receive advanced training in chemical engineering but do not qualify for or wish to pursue the Ph.D. degree and to students pursuing a Ph.D. who wish to receive a Master's degree "in-passing."

Program Admission Procedure

The admission requirements for the M.S. program are essentially the same as those of the Graduate School. For unconditional admission, a minimum score of 1100 (Verbal and Quantitative) on the GRE and a minimum 3.0 on a 4.0 scale undergraduate GPA is expected. Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background in chemical engineering, e.g., B.S. Chemists, Biologists (approximately one year of undergraduate courses may be required).

International applicants are required to take the TOEFL examination if English is not the native language. Applicants who have not scored 550 or higher on the TOEFL may choose to apply to the Intensive English as a Second Language (IESL) Program. Successful completion of this program or passing the Exit Examination in the advanced level of IESL will be considered adequate proof of the English proficiency required for course work in the M.S. program. Acceptance to the Intensive English Program does not constitute acceptance to the M.S. program. For information and application forms, write to IESL, University of Louisville, Louisville, KY 40292.

Program Curriculum Requirements

M.S. in Chemical Engineering with thesis Curriculum Requirements

The general requirements of the M.S. with thesis program are the same as those of the Graduate School. Other specific guidelines for the M.S. degree in chemical engineering with thesis are these:

Minimum course hours beyond baccalaureate degree in Chemical Engineering – 24 Semester Hrs

	Hours	Total
ChE 610, Advanced Thermodynamics	3	
ChE 620, Transport Phenomena	3	
ChE 641, Advanced Reactor Design	3	
ChE 686, Chemical Engineering Analysis	3	
ChE 695, Chemical Engineering Seminar	2	
Other 500-600 level courses (at least one course outside ChE) (not all may be 500 level)	12	
ChE 690, Research in Chemical Engineering	6	
Total Credit Hours		32

M.S. in Chemical Engineering (Non Thesis Alternative) Curriculum Requirements

The general requirements of the M.S. (Non Thesis Alternative) program are the same as those of the Graduate School. Other specific guidelines for the M.S. (Non Thesis Alternative) degree in chemical engineering are these:

Minimum course hours beyond baccalaureate degree in Chemical Engineering – 30 Semester Hrs

	Semester Hours
ChE 610, Advanced Thermodynamics	3
ChE 620, Transport Phenomena	3
ChE 641, Advanced Reactor Design	3
ChE 686, Chemical Engineering Analysis	3
ChE 695, Chemical Engineering Seminar	2
Other 500-600 level courses (at least one course outside ChE) (not all may be 500 level)	18
Total Credit Hours	32

Master of Engineering in Chemical Engineering

Major Code: CHE

Degree Code: MEN

Unit: SP

Department Webpage: <http://www.louisville.edu/speed/chemical>

General Information

The Master of Engineering with specialization in Chemical Engineering (M.Eng.Ch.E.) is a degree offered by the Speed School of Engineering. It is accredited at the advanced level by the Accreditation Board for Engineering and Technology (ABET). Students can obtain a concentration in Biochemical Engineering as part of their degree program.

Admission Requirements

Requirements for admission or readmission include:

1. Completion of a program of studies equivalent to that obtained through the Division of Pre-Engineering and Basic Studies for the field of Chemical Engineering; this includes

one calendar year of cooperative education, or the equivalent in full time employment, within the Chemical Process Industries.

2. Recommendation by the faculty and chair of the Department of Chemical Engineering
3. A cumulative baccalaureate program grade-point average of 2.50/4.00 for unconditional acceptance.
4. Applications for admission to the M.Eng.Ch.E. degree program should be submitted directly to the Admissions Office of the JB Speed School of Engineering rather than to the Graduate School.

Prerequisite Requirements

Since the M.Eng.Ch.E. is accredited as part of a five year program, the requirements of item (1) above in the section of Admissions must be satisfied exactly. This is very difficult for students who have not matriculated through the preceding four years at the Speed School. Therefore, almost all students who earn an ABET accredited undergraduate degree pursue the M.S.Ch.E. or Ph.D. degrees.

Degree Requirements

The M.Eng.Ch.E. degree requires the following over and above the Bachelor of Science in Chemical Engineering Degree.

	Semester Hours	Total
Higher Studies Division ¹ ChE 595, 610, 620, 641, 686, XXX ² , XXX ² , XXX ² , XXX ²	25	
Thesis Alternative - ChE 697 ³ OR Course Work And Project Alternative - ChE 698, 699 ⁵	6	
Minimum Total		314

¹ A student entering the Division of Higher Studies will be required to select either the thesis alternative path or the course work and project alternative path for the degree program.

² A student specializing in Ch.E. is required to select four approved electives (500 or 600 level) totaling at least 12 semester hours. By proper choice of these electives, a student may develop specific strengths in areas such as materials, pro-

cess control, mass transfer and separations, pollution prevention, or biochemical engineering. However, depending on faculty availability and other departmental needs, sufficient courses may not be offered in any one or two year period to allow a student to specialize in some of these areas. These electives need not necessarily be Chemical Engineering courses, but the student's research advisor and academic advisor must approve non-Chemical Engineering courses.

³ A regularly enrolled student selecting the thesis alternative is required to select both an approved M.Eng. thesis topic and the members of the thesis committee during the first term of the graduate/professional year. Six (6) semester hours of Ch.E. 697 are required to satisfy the minimum M.Eng. thesis requirements.

⁴ The five-year total for the M.Eng. degree is 168 hours.

⁵ A student selecting the course work alternative will substitute ChE 698 and ChE 699 for 6 hours of M.Eng. thesis.

Departmental Faculty

Professors

Dermot J. Collins
Pradeep B. Deshpande
Kyung A. Kang, *Graduate Program Director*
Walden L.S. Laukhuf, *Associate Chair*
Patricia A. Ralston
Thomas L. Starr, *Associate Dean for Research and Facilities*
James C. Watters, *Chair*
Undergraduate Student Advisor
Associate Professors
Mahendra Sunkara

Assistant Professors

R. Eric Berson
Gerold A. Willing

Associate Faculty

Richard P. Baldwin, *Chemistry*
Lawrence Gettleman, *Prosthodontics and Biomaterials*
Elias Klein, *Medicine*
Richard A. Ward, *Medicine*

Adjunct Faculty

Duane F. Bruley
Garrett Cawthon
Britton Chance
Kyung-Ju Choi
Thomas R. Hanley
Raul Miranda
Sundeep Dronawat
Harold J. Smith
Joseph A. Zimlich

Emeritus

Marvin Fleischman

Earl R. Gerhard, *Emeritus Dean*

Dean O. Harper

Doctor of Philosophy in Civil Engineering

Major Code: CE

Degree Code: PHD

Unit: GS

Department Webpage: <http://speed.louisville.edu/civil/>

General Information

The Department of Civil and Environmental Engineering of the Speed School of Engineering, the school of engineering and applied science of the University of Louisville, offers programs of study leading to the degrees of Master of Science and Doctor of Philosophy in Civil Engineering. It also offers an integrated five-year program of cooperative education leading to the professional degree of Master of Engineering (described in the University's Undergraduate Catalog).

Admission Requirements

The admission requirements for the M.S. and Ph.D. programs are essentially the same as the general requirements of the Graduate School. Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background in civil engineering.

Curriculum

The general requirements for the Doctor of Philosophy program are the same as those of the Graduate School. Other specific requirements for the Ph.D. in Civil Engineering are:

	Hours	Total
CEE 699, CE PhD Research	18	
CEE 698, CE PhD Seminar	3	
In-Discipline Program Courses and Electives*	27	
Total		48

*May include up to 6 hours credit in approved mathematics

Master of Science in Civil Engineering

Major Code: CE

Degree Code: MS

Unit: GS

Department Webpage: <http://speed.louisville.edu/civil/>

General Information

The Department of Civil and Environmental Engineering of the Speed School of Engineering, the school of engineering and applied science of the University of Louisville, offers programs of study leading to the degrees of Master of Science and Doctor of Philosophy in Civil Engineering. It also offers an integrated five-year program of cooperative education leading to the professional degree of Master of Engineering (described in the University's Undergraduate Catalog).

Curriculum

General requirements of the Master of Science Program are the same as those of the Graduate School. Other, specific requirements for the M.S. degree in civil engineering are these:

	Hours	Total
Civil Engineering Courses (at least 9 hours at the 600 level)	12	
Other 500-600 level courses (at least two courses outside civil engineering)	12	
Thesis for M.S.	6	
Minimum Total		30

A minimum of 12 hours must be at the 600-level, exclusive of thesis hours.

Master of Science in Civil Engineering Non-Thesis Option

Requirements: The non-thesis option will be open to any student enrolled in the Civil Engineering Master of Science degree program with no restrictions. The program utilizes existing courses and administrative infrastructure while the overseas degree program will be self-supporting from program fees and tuition.

The program will require a minimum of 30 credit hours of graduate courses, with a minimum of 15 credits at the 600-level. The specific courses will be selected in consultation with the student's academic advisor.

Admission Requirements

The admission requirements for the M.S. and Ph.D. programs are essentially the same as the general requirements of the Graduate School. Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background in civil engineering.

Master of Engineering in Civil Engineering

Major Code: CE

Degree Code: MEN

Unit: SP

Department Webpage: <http://speed.louisville.edu/civil/>

General Information

The Department of Civil and Environmental Engineering of the Speed School of Engineering, the school of engineering and applied science of the University of Louisville, offers programs of study leading to the degrees of Master of Science and Doctor of Philosophy in Civil Engineering. It also offers an integrated five-year program of cooperative education leading to the professional degree of Master of Engineering (described in the University's Undergraduate Catalogue).

Higher Studies Division

CEE 680, 697¹(9)

In addition, at least 21 semester hours of course work must be completed in one of the following specialty areas²:

Facilities Engineering (including courses in geotechnical/structural)

CEE 520, 522, 552, 604, 620, 621, 625, 650, 651, 652, 653, 654 (21 hours)

Public Works Engineering (includes courses in geotechnical/transportation/water resources)

CEE 552, 560, 570, 571, 572, 604, 650, 651, 652, 653, 654, 660, 662, 665, 670, 673, 674 (21 hours)

At the discretion of the student's advisor, the following Environmental courses may be selected to fulfill program elective requirements for either Facilities Engineering or Public Works Engineering.

CEE 509, 534, 535, 561, 573, 675, 694

Minimum Total..... 30³

Notes:

1. A regularly enrolled full-time student is required to select an approved M.Eng. thesis topic and the members of the thesis committee during the first term of the graduate/professional year.
2. Both specialty areas meet the engineering topics criteria of the EAC/ABET.
3. The five-year total for the M.Eng. degree is 163 semester hours.

Departmental Faculty

Professors

J. P. Mohsen , *Chair*

N. R. Bhaskar

Louis F. Cohn

Mark French

D. Joseph Hagerty

R. A. Harris

Thomas Holloman

Arthur C. Parola

Mario Paz

Charles R. Ullrich

Terence A. Weigel

Emeritus

Michael A. Cassaro

C. Eugene Miller

Doctor of Philosophy in Computer Science and Engineering

Major Code: CSE

Degree Code: PHD

Unit: GS

Department Webpage: <http://www.louisville.edu/speed/cecs/>

General Information

The Computer Engineering and Computer Science Department (CECS) and the Electrical and Computer Engineering Department (ECE) jointly offer the Ph.D. degree in Computer Science and Engineering (CSE) through the Graduate School. Students interested in the Ph.D. program should contact Ms. Gina Payne-Yunker, Computer Science and Engineering Program Secretary (J.B. Speed Hall, Rm 124; glpayn01@gwise.louisville.edu or Dr. Rammohan Ragade: rkraga01@gwise.louisville.edu).

Admission

Typically, students who apply to the Ph.D. program will have completed a master's degree. Applicants whose score on the Verbal and Quantitative sections of the Graduate Record Examination General Test is 1200, who have a master's degree in Computer Engineering, Computer Science and Engineering, Electrical Engineering, or Engineering Mathematics and Computer Science from an accredited program, and whose grade point average is at least 3.25/4.0 may be granted unconditional admission.

Applicants with master's degrees in other branches of engineering, computer science, chemistry, physics, or mathematics may be admitted conditionally and may be required to complete up to 30 hours of undergraduate courses before being admitted to degree status. Applicants with degrees in fields other than those enumerated in this paragraph will be directed to enroll as postbaccalaureate students and complete up to 30 hours in computer hardware and software courses and may be required to complete up to 24 hours of mathematics courses in order to provide a background adequate for admission to the Ph.D. program.

After the completion of 9 hours of post-baccalaureate courses, a student is reviewed by the program faculty to assess the student's capacity for doctoral-level work and to assist in developing an appropriate course of study. The review is based on an evaluation of the performance of the student in courses taken for credit in the CSE program. Upon recommendation of the program faculty, a student who fails this review may repeat it at the next offering; however, the review may not be taken more than twice.

Computer Science and Engineering provides a broad base in both hardware and software and in the application of computer concepts to other disciplines. The core curriculum covers essential mathematics, provides a background in computer software and hardware, and includes an introduction to computationally intensive applications.

Program

Doctoral students must complete at least two courses (6 hours) in each of two core areas and must complete one course in each of the remaining two core areas. They must complete a sufficient number of additional approved electives to ensure a depth of preparation in the field of Computer Science and Engineering. The four core areas are: Computer Software Engineering, Computer Hardware Engineering, Computationally Intensive Applications, and Advanced Mathematics. Each student must also complete 3 hours of Seminar (CSE 695), but no more than 3 hours of CSE 695 may be credited toward the degree.

- Computer Software Engineering core courses include: CECS 504, 530, 545, 550, 608, 619, 630.
- Computer Hardware Engineering core courses include: CECS 510, 515, 611, 632, and ECE 516/CECS 525.

- Computationally Intensive Applications core courses include: ECE 520, 545, 550, 560, 614, 620, 650, 661, 662, 670; CECS 522, 542, 622, 628; ECE 618/CECS 627, ECE 619/CECS 633.
- Advanced Mathematics core courses include: CECS 508, 563, 615; MATH 501, 511, 581, 660, 662, 681.

A student must consult with the dissertation advisor before registering for courses. A minimum of 72 semester hours of post-baccalaureate credit (including up to 24 semester hours for the dissertation), plus 3 hours of CSE Seminar (CSE 695) are required for the degree.

Upon the completion of the formal course work required for the Ph.D., a student must pass a written preliminary examination for admission to candidacy. The student shall prepare a formal plan of study for review by the dissertation committee soon after the formulation of the committee. This plan must be approved by the CSE Coordinator.

Each student is also required to prepare a written dissertation proposal and present it to the dissertation committee for approval. The dissertation proposal should be a sufficiently complete statement of the proposed research so that the committee can judge the originality, significance and likely success of the research. It should contain a detailed review of the previous contributions of others in the proposed area, with supporting reference citations. It should contain a clear statement of the proposed contributions, emphasizing the facets that will make this work unique, and it should include enough supporting detail and preliminary results so that an assessment of likelihood of success can be made. Appearance, format and citations should be in conformance with the requirements of the Graduate School.

After the committee has approved the dissertation proposal, the committee shall prepare a written examination pertaining to the proposal as well as background areas. This examination is called the preliminary examination. Upon successful completion of this examination, the student is admitted to candidacy status by the Graduate School.

Master of Science in Computer Science

Major Code: CS

Degree Code: MS

Unit: GS

Department Webpage: <http://www.louisville.edu/speed/cecs/>

Program Information

This program is available for interested individuals who have an adequate background, but do not necessarily have a baccalaureate degree in engineering. This program is governed by the general regulations of the University of Louisville Graduate School and is accredited by the Southern Associations of

Colleges and Schools. Interested students should contact the Department of Computer Engineering and Computer Science office for further information about the Master of Science Program.

Admission Requirements

Please check application deadlines for prospective semesters. The admission requirements for the M.S. programs are essentially the same as the general requirements of the Graduate School.

Prerequisites: (not included in degree program)

- A bachelor's degree.
- Successful completion of CECS 121, 122, 230, 302, 310, 325, 335, 420, and 440 or their equivalents and IE 360.

Curriculum Requirements

Required Courses	Semester Hours	Total
CECS 504, Automata Theory <i>or</i> CECS 530, Design of Compilers	3	
CECS 550, Software Engineering <i>or</i> CECS 630, Data Base Design	3	
CECS 619, Design and Analysis of Computer Algorithms <i>or</i> CECS 545, Artificial Intelligence	3	
CECS 622, Simulation & Modeling of Discrete Systems <i>or</i> CECS 522, Performance Evaluation of Computer Systems	3	
CECS 516, Fundamentals of Computer Communications and Networks <i>or</i> CECS 629, Distributed System Design	3	
CECS 563 Experimental Design in Engineering <i>or</i> CECS 508, Numerical Analysis	3	
CECS 690, M.S. Thesis in Computer Science <i>or</i> 2 CECS 600-level graduate courses for non-thesis options*	6	24
Elective Courses		
Computer Science	3	

Technical electives (may be from areas other than computer science)	3	6
Minimum Total		30

NOTES:

- A minimum of 15 semester hours (including computer science thesis credit) must be in courses numbered 600 or above.
- Electives require approval of student's graduate committee or graduate program advisor.
- Languages such as C, C++, and JAVA might be needed. These are offered at the undergraduate level; not for graduate credit.
- *Two CECS graduate faculty with the student's advisor must devise a plan of study with the student during the first semester outlining the requirements for successful completion of the non-thesis option. The study plan will be forwarded to the Graduate School for further approval and documentation.

Master of Engineering in Computer Engineering Computer Science

Major Code: CECS

Degree Code: MEN

Unit: SP

Department Webpage: <http://www.louisville.edu/speed/cecs/>

General Information

The Department of Computer Engineering and Computer Science of the Speed School of Engineering at the University of Louisville, offers an integrated five-year program of cooperative education leading to the professional degree of Master of Engineering with a specialization in Computer Engineering and Computer Science. The first four (4) years are described in the University's Undergraduate Catalogue.

The Department also offers a program of study leading to the degree of Master of Science in Computer Science and a doctoral program in cooperation with the Department of Electrical and Computer Engineering. For more information on the doctoral program refer to the program section on Computer Science and Engineering.

Program Information

On entering the Professional School, the student chooses an area of concentration for the master's thesis and selects a sequence of program elective courses for the thesis concentration (see list of courses at the end of the program). The Master of Engineering degree is accredited by EAC/ABET under the

criteria for Computer Engineering. Students with ABET accredited Bachelors degrees in Engineering will also be considered for this degree.

	Semester Hours
Higher Studies Division 1,3	
CECS 502, 510, 530	7
CECS 619, 622, 630, 697 ³	17
Approved CECS Electives 2,4	6
ECE 511	1
Minimum Total	31

¹CECS students are required to take the "C++" and "JAVA" programming language course. "C++" and "JAVA" programming is used in several CECS courses.

²The CECS elective may be chosen from the following approved list: CECS 522, 530, 542, 545, and 546

³A full-time student is required to have selected both an approved M.Eng. thesis topic and the director of the thesis committee during the first term of the graduate/professional year.

⁴Required CECS program elective courses may be chosen from CECS 600-level courses to provide concentration at the Master of Engineering level in the areas of research focus in the department. Lists of appropriate engineering design courses and engineering science courses are available in the CECS Department.

*The five-year total for the M.Eng. degree is 163 semester hours.

Departmental Faculty

Professors

Adel S. Elmaghraby, *Chair*

James H. Graham

Anup Kumar

Melvin J. Maron, *EM-Core Coordinator*

Rammohan K. Ragade, *CSE Ph.D. Coordinator*

Peter B. Aronhime

Darrel L. Chenoweth

Thomas G. Cleaver

Robert W. Cohn

Joseph D. Cole

Aly A. Farag

Barry R. Horowitz

Jacek M. Zurada

Associate Professors

Dar-jen Chang

Ahmed H. Desoky, *M.Eng. Coordinator*

Ibrahim N. Imam

Mehmed M. Kantardzic

Assistant Professors

Antonio Badia

Emeritus

Khaled A. Kamel

Arthur M. Riehl

Doctor of Philosophy in Electrical Engineering

Major Code: EE

Degree Code: PHD

Unit: GS

Department Webpage: <http://www.ece.louisville.edu/>

General Information

The objective of this program is to prepare the student for practice, research and/or teaching of electrical engineering at the advanced level. Upon the completion of the program, the student should be able to analyze a broad range of advanced problems in his or her field of specialization and determine the appropriate analysis technique or solution. It is expected that the student will publish his or her dissertation research in at least one refereed publication in a national or international journal.

The Department of Electrical and Computer Engineering, offers a program of graduate study leading to the degree of Master of Science. It also offers an integrated five-year program of cooperative education leading to the professional degree Master of Engineering (described in the University's Undergraduate Catalog).

The Department of Electrical and Computer Engineering offers a Ph.D. degree in Electrical Engineering and also participates in the Ph.D. program in Computer Science and Engineering, offered jointly with the Computer Engineering and Computer Science Department.

Admission Requirements

For admission into the EE Ph.D. Program, it is highly recommended that students have an undergraduate GPA of at least

3.5 on a 4.0 scale. Also recommended are a combined score of 1200 on the verbal and quantitative portions of the GRE and at least a 3 on the AAW portion of the new GRE test. GRE subject tests are not required. For students whose native language is not English or who received an undergraduate degree from a non-English speaking country, the TOEFL test is required. A student should score at least 550 or higher on the paper-based test or 213 on the computer-based test. An applicant who does not meet some requirements, but whose credentials are otherwise acceptable, may be admitted on a conditional basis. Normally, it is expected that the student will complete a Master's degree before being admitted to the Ph.D. Program. Admission to the Ph.D. Program without a Master's degree will be permitted only in very exceptional circumstances.

Curriculum Requirements

The Ph.D. in Electrical Engineering is structured to be in strict conformity with the curricular requirements of the University of Louisville Graduate School. Completion of the program requires a minimum of 48 semester hours beyond a Master's degree in electrical engineering. The curriculum includes coursework in advanced mathematics, in-discipline technical electives, and additional program electives.

Minimum Curricular Requirements of the Program

Requirement	Semester Hours
Mathematics	6
In-Discipline Electives	15
Program Electives	9
Dissertation	18
Total (minimum)	48

The mathematics requirement of six hours provides the analytical background necessary to complete the demanding program of study and research in advanced engineering topics. Approved mathematics electives are drawn from both the Computer Engineering and Computer Science Department in the Speed School of Engineering and the Mathematics Department in the College of Arts and Sciences.

Candidates must take 15 graduate level semester hours of in-discipline (electrical engineering) electives and 9 graduate level semester hours of program electives chosen from other departments in the Speed School of Engineering and/or from other departments in the University as determined in consultation with the dissertation advisor. Together, the in-discipline electives and program electives must support the candidate's research effort and constitute an integrated program of study. The student's advisor and the Director of Graduate Studies must approve individual course plans.

ECE Graduate Students are allowed to take only 6 (six) hours of Independent Study (ECE 593 or 693) and/or Projects (ECE

505 or 605). These courses may be taken in any combination, but the total number of hours is NOT to exceed 6 (six).

Once a student has completed course and dissertation hours (in EE Ph.D.), that student must register for DOCT 600 (Doctoral Candidacy) in order to stay active in the EE Program. International students must do this as well in order to stay in compliance with INS requirements.

Contact Information

For admission applications and additional information on financial assistance, contact:

Lisa Bell
 EE M.S. and Ph.D. Program Secretary
 llbell02@athena.louisville.edu
 W.S. Speed Hall, Room 200
 University of Louisville
 Louisville, KY 40292

Master of Science in Electrical Engineering

Major Code: EE
 Degree Code: MS
 Unit: GS
 Department Webpage: <http://www.ece.louisville.edu/>

General Information

The objective of this program is to prepare the student for practice, research and/or teaching of electrical engineering at the advanced level. Upon the completion of the program, the student should be able to analyze a broad range of advanced problems in his or her field of specialization and determine the appropriate analysis technique or solution. It is expected that the student will publish his or her dissertation research in at least one refereed publication in a national or international journal.

The Department of Electrical and Computer Engineering (ECE), offers a program of graduate study leading to the degree of Master of Science. It also offers an integrated five-year program of cooperative education leading to the professional degree Master of Engineering (described in the University's Undergraduate Catalog).

The Department of Electrical and Computer Engineering offers a Ph.D. degree in Electrical Engineering and, also participates in the Ph.D. program in Computer Science and Engineering, offered jointly with the Computer Engineering and Computer Science Department.

Program Admission Procedure

Applicants for admission to the M.S. program in Electrical Engineering should have a baccalaureate degree in Electrical Engineering or Electrical and Computer Engineering with a GPA of 3.0/4.0 or better. A baccalaureate degree in another branch of engineering or in chemistry, computer science, life sciences, mathematics, or physics may be acceptable but the student may be required to take undergraduate courses in ECE to attain adequate preparation for graduate work. While no fixed minimum score on the Graduate Record Examination is required for admission, experience has shown that a combined score of 1170 (verbal + quantitative) is a good indicator of success in a graduate program in Electrical Engineering. In addition, to be successful, applicants should have received at least a 3 on the AAW portion of the new GRE exam. For students whose native language is not English or who received an undergraduate degree from a non-English speaking country, the TOEFL test is required. It is highly recommended that a student should score at least 550 or higher on the paper-based test or 213 on the computer-based test. An applicant who does not meet some requirements, but whose credentials are otherwise acceptable, may be admitted on a conditional basis. New students will not normally be considered for financial aid until after they have taken at least one semester of graduate courses at the University of Louisville.

A complete application packet should contain an application form, official transcripts of all college credit, GRE and TOEFL (if required) scores, and at least two letters of recommendation.

Advising – Thesis or Paper Option

The Graduate Program Director will serve as the temporary advisor for new graduate students. During the second semester of graduate work, a permanent advisor, who will serve as the student's thesis/paper director, should be selected by the student, in consultation with the Graduate Program Director. By the end of the second semester, the student, in consultation with the thesis/paper director, should select the remaining members of the thesis/paper committee, and submit a plan of study and thesis/paper proposal, approved by the committee, to the Graduate Program Director. The thesis/paper committee must include, at minimum, the thesis/paper director and two other graduate faculty members, one of whom must be from outside Electrical and Computer Engineering.

Advising – Course Only Option

The Graduate Program Director will serve as the temporary advisor for new graduate students. During the second semester of graduate work, a permanent advisor should be selected by the student, in consultation with the Graduate Program Director. By the end of the second semester, the student, in consultation with the permanent advisor, should submit a plan of study, approved by the permanent advisor, to the Graduate Program Director.

Curriculum Requirements

Thesis/Paper Alternative	Semester Hours
Program Electives ECE 6XX ¹ -----	12
Program Electives ECE 5XX or ECE 6XX ¹ -----	3
Program or Technical Electives 5XX or 6XX ² ---	9
M.S. Thesis ECE 690 or Paper ECE 691 -----	6
Minimum Total -----	30 ⁴
Course-Only Option	Semester Hours
Program Electives ECE 6XX ^{1,3} -----	15
Program Electives ECE 5XX or ECE 6XX ¹ -----	6
Program or Technical Electives 5XX or 6XX ² -----	9
Minimum Total -----	30 ⁴

¹ Courses selected to meet the 500 and 600 level Program Electives require the approval of the student's advisor. Note that 600 level courses may be substituted for 500 level courses.

² Courses selected to meet the 500 and 600 level Technical Electives require the approval of the student's advisor and may be selected from areas outside ECE. Note that 600 level courses may be substituted for 500 level courses.

³ Must include ECE 692 or a course from a list of approved research/project courses (maintained by the Department) and ECE 696.

⁴ At least half of the hours must be at the 600 level or above.

Program electives are selected from ECE courses. Technical electives are selected, with the advisor's approval, from courses in related fields, such as other engineering disciplines, computer science, mathematics, and the physical and biological sciences.

At least two ECE core courses must be selected from the following three groups of core courses, and the two courses must be from different groups.

Group 1: ECE 510/511, ECE 516

Group 2: ECE 515/514, ECE 533/534, ECE 542, ECE 540/541, ECE 569

Group 3: ECE 520/521, ECE 530, ECE 550/551, ECE 560/561, ECE 625

ECE Graduate Students are allowed to take only six (6) hours of Independent Study and Project courses (ECE 505, 593, 605, 692, 693, 699). These courses may be taken in any combinations, but the total number of hours is not to exceed six (6).

Once a thesis or paper student has completed course and thesis or paper hours, that student must register for MAST 600 (Masters Candidacy) in order to stay active in the EE M.S. program. International students must do this as well in order to stay in compliance with INS regulations.

Contact Information

For admission applications and additional information on financial assistance, contact:

Lisa Bell
 EE M.S. and Ph.D. Program Secretary
 llbell02@athena.louisville.edu
 W.S. Speed Hall, Room 200
 University of Louisville
 Louisville, KY 40292

Master of Engineering in Electrical Engineering

Major Code: EE
 Degree Code: MEN
 Unit: SP
 Department Webpage: <http://www.ece.louisville.edu/>

General Information

The mission of the electrical engineering program is to educate students in a professional school context, with the students completing a five-year program including cooperative education assignments and a major design experience.

The Department of Electrical and Computer Engineering, offers an integrated five-year program of cooperative education leading to the professional degree Master of Engineering (described in the University's Undergraduate Catalogue).

The department also offers programs leading to Master of Science and Ph.D. degrees in electrical engineering and also participates in the Ph.D. program in Computer Science and Engineering, offered jointly with the Computer Engineering and Computer Science Department.

Minimum Curricular Requirements of the Program

Higher Studies Division Total 1	Hours
ECE 500-level Program Electives ²	9-13
ECE 600-level Program Electives ²	9-13
XX 500-level Technical Elective ³	3
XX 600-level Technical Elective ³	3
ECE 697 or ECE 698 ⁴ (thesis or paper alternative)	0-8
Minimum Total	32 ⁵

Notes:

1. A total of nine semester hours of design electives is required in the Higher Studies Division. A list of approved Design Electives is available in the Department.
2. Courses selected to meet the 500 and 600 level Program Electives require the approval of the student's thesis director. Students selecting the thesis or paper alternative must complete 9 semester hours. Students selecting the courses alternative must complete 13 semester hours.
3. Courses selected to meet the 500 and 600 level Technical Electives require the approval of the student's thesis director.
4. The requirement for the major design experience, as specified by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET), may be satisfied by either ECE 697 Master of Engineering Thesis in Electrical Engineering or ECE 698 Master of Engineering Paper in Electrical Engineering, or a course designated by the department as providing the major design experience.
5. The five-year total for the M.Eng. degree is 167 semester hours.

ECE Graduate Students are allowed to take only (six) hours of Independent Study (ECE 593 or 693) and/or Projects (ECE 505 or 605). These courses may be taken in any combination, but the total number of hours is NOT to exceed 6 (six).

Once a student has completed course and thesis hours (in ECE M.Eng.), that student must register for MENG 600 (Master of Engineering Residency) in order to stay active in the EE M.Eng. Program. International students must do this as well in order to stay in compliance with INS requirements.

Master of Engineering and Electrical Engineering (Non-Thesis Alternative)

THESIS ALTERNATIVE	Semester Hours
Program Electives ECE 6XX	12
Program Electives ECE 5XX or ECE 6XX	3
Program or Technical Electives 5XX or 6XX	9
M.S. Thesis ECE 690	6
Minimum Total	30

NON-THESIS ALTERNATIVE	Semester Hours
Program Electives ECE 6XX	15
Program Electives ECE 5XX or ECE 6XX	6
Program or Technical Electives 5XX or 6XX	9
Minimum Total	30

Program electives are selected from ECE courses. Technical electives are selected, with the advisor's approval, from courses in related fields, such as other engineering disciplines, computer science, mathematics, and physical and biological sciences.

ECE Graduate Students are allowed to take only six (6) hours of Independent Study (ECE 593 or 693) and/or Projects (ECE 505 or 605). These courses may be taken in any combinations, but the total number of hours is not to exceed six (6).

Once a student has completed course and thesis hours, that student must register for MAST 600 (Masters Candidacy) in order to stay active in the EE M.S. program. International students must do this as well in order to stay in compliance with INS regulations.

Contact Information

For admission applications and additional information on financial assistance, contact:

Lisa Bell
 EE M.S. and Ph.D. Program Secretary
 llbell02@athena.louisville.edu
 W.S. Speed Hall, Room 200
 University of Louisville
 Louisville, KY 40292

Departmental Faculty

Professors

Jacek M. Zurada, *Chair*
 Darrel L. Chenoweth
 Thomas G. Cleaver
 Robert W. Cohn
 Joseph D. Cole
 Aly A. Farag
 Barry R. Horowitz

Associate Professors

Bruce W. Alphenaar
 Hollace L. Cox
 John H. Lilly
 Kevin M. Walsh

Assistant Professors

John F. Naber
 Xiangqian Liu

Emeritus

Peter B. Aronhime
 Samuel V. Bell, Jr
 Kiron C. Bordoloi
 J. Carroll Hill
 Leo B. Jenkins, Jr.
 Donald J. Scheer

Doctor of Philosophy in Industrial Engineering

Major Code: IE

Degree Code: PHD

Unit: GS

Department Webpage: <http://www.louisville.edu/speed/industrial/>

General Information

The general requirements of the Doctor of Philosophy program are the same as those of the Graduate School. GRE and TOEFL scores are required. Other specific guidelines for the Ph.D. degree in Industrial Engineering include a minimum total of 76 semester hours of post-baccalaureate degree courses, including no more than 18 semester hours for doctoral dissertation credit.

Applicants to the program will normally have completed a master's degree; however, in exceptional cases, a qualified student may be admitted directly to the doctoral program after receiving the B.S. degree. Students with a B.S. in another branch of engineering, or in chemistry, physics, or mathematics are required to resolve undergraduate deficiencies by taking up to 25 semester hours of industrial engineering coursework. Students with a B.S. in areas other than the above are required to take at least 25 semester hours of undergraduate industrial engineering courses, and to demonstrate mathematical preparation comparable to that provided by an ABET accredited engineering program. Typically, an acceptable undergraduate record in mathematics would include calculus, differential equations, linear algebra, and probability and statistics.

Potential applicants to the Ph.D. degree program are encouraged to request more detailed information regarding program requirements from the Department of Industrial Engineering and Graduate School.

Master of Science in Industrial Engineering

Major Code: IE

Degree Code: MS

Unit: GS

Department Webpage: <http://www.louisville.edu/speed/industrial/>

General Information

Admission Requirements

Candidates for admission into the MSIE degree program must satisfy the following requirements for admission:

- Baccalaureate degree with complete transcripts
- 2.75/4.00 GPA for unconditional admission
- A combined verbal and quantitative score for the GRE basic examination of at least 1000
- For international students, a TOEFL score of at least 550 (written) or 213 (computer-based).

Prerequisite Requirements

A candidate with a B.S. IE degree will have to give evidence of having taken the courses listed below for non-B.S. IE degree holders. A candidate with a B.S. degree in an engineering discipline other than IE must take the following courses, unless his/her transcript contains an equivalent course.

- IE 360, Probability and Statistics for Engineers
- IE 320, Manufacturing Processes
- IE 421, Facility Location and Layout
- IE 380, Work Design
- IE 415, Operations Research

A candidate with a baccalaureate in an area other than engineering (e.g., mathematics, physics, psychology) must take all of the above course prerequisites, plus any other courses his/her thesis advisor deems appropriate.

Course/Credit Hours

Required Courses

- IE 541, Simulation (3)
- IE 570, Engineering Design Economics (3)
- IE 581, Ergonomic Techniques in the Workplace (3)
- IE 630, Advanced Production Systems Design (3)
- IE 657, Models for Design and Analysis of Logistical Systems (3)
- IE xxx, Industrial Engineering electives (9)

Thesis Alternative

- IE 690, M.S. Thesis in Industrial Engineering (6)

Non-Thesis Alternative

- IE 699, Industrial Engineering Master's Project (3)
- IE xxx, Industrial Engineering elective (3)

TOTAL = 30

Advising

Entering M.S. IE students will be advised by the M.S. IE Program Coordinator, Dr. Evans.

Master of Engineering in Industrial Engineering

Major Code: IE

Degree Code: MEN

Unit: SP

Department Webpage: <http://www.louisville.edu/speed/industrial/>

General Information

The Master of Engineering with specialization in Industrial Engineering (M.Eng.IE) is a professional degree offered by the Speed School of Engineering. It is accredited at the advanced level by the Accreditation Board for Engineering and Technology (ABET).

Admission

Requirements for admission or readmission include:

- Completion of a program of studies equivalent to that obtained through the Speed School of Engineering Division of Pre-Engineering and Basic Studies for the field of Industrial Engineering;
- Recommendation by the faculty and chair of the Department of Industrial Engineering; and
- A cumulative baccalaureate program grade-point average of 2.50/4.00 for unconditional admission.

Prerequisite Requirements

Since the M.Eng.IE is accredited as part of a five year program, the requirements of item (1) above in the section of Admissions must be satisfied exactly. This is very difficult for students who have not matriculated through the preceding four years at the Speed School. Therefore, almost all students who earned an ABET accredited undergraduate degree elsewhere pursue the M.S. IE or Ph.D. degrees.

Degree Requirements

The minimal requirements for eligibility for the M.Eng.IE are set below.

Course/Credit Hours**Required Courses**

- The academic courses and three completed cooperative internship periods required in the Divisions of General Engineering

and Basic Studies (or equivalent) (135)

- IE 581, Ergonomic Techniques in the Workplace (3)
- IE 630, Advanced Production Systems (3)
- IE 640, Applied Systems Analysis (3)
- IE 650, Material Flow Systems Design (3)
- IE 657, Models for Design and Analysis of Logistical Systems (3)
- IE xxx, Industrial Engineering electives (9)

Thesis Alternative

- IE 697, M.Eng. Thesis in Industrial Engineering (6)

Non-Thesis Alternative

- IE 699, Industrial Engineering Master's Project (3)
- IE xxx, Industrial Engineering elective (3)

TOTAL = 165

Advising

M.Eng. IE candidates are advised by the department chairman

Departmental Faculty**Professors**

John S. Usher , *Chair*

Suraj M. Alexander

William E. Biles, *Clark Professor of Computer-Aided Engineering*

Gerald W. Evans

Sunderesh Heragu, *Duthi Chair of Engineering Logistics*

Carol O'Conner Holloman

Waldemar Karwowski

Herman R. Leep

Assistant Professors

Naira Campbell-Kyureghyan

Associates

Gail W. DePuy

Doctor of Philosophy in Mechanical Engineering

Major Code: ME

Degree Code: PHD

Unit: GS

Department Webpage: <http://www.louisville.edu/speed/mechanical/>

General Information

The Department of Mechanical Engineering in the J.B. Speed School of Engineering offers a program of study leading to the degree of Doctor of Philosophy in Mechanical Engineering. This program provides an opportunity for students to complete advanced course work and conduct independent research in the following specialization areas: Biomechanics or Advanced Product Design and Development.

Completion of the program requires forty- eight (48) semester hours beyond a Masters degree in mechanical Engineering, or seventy- eight (78) semester hours beyond a baccalaureate degree in Mechanical Engineering.

Required Core Courses	Semester Hours	Total
Research Seminar	3	
Advanced Mathematics	6	
Mechanical Engineering Technical Core (appropriate for the specialization area)	6	
Technical Electives	15	
Dissertation Research	18	
Minimum Total		48

Admission to the Doctoral Program

Unconditional admission into the Doctor of Philosophy program requires an earned mechanical engineering master's degree and the following credentials:

- Minimum undergraduate GPA of 3.0/4.0; minimum graduate GPA of 3.25/4.0.
- Three letters of recommendation, with at least two addressing the applicant's ability to perform independent research successfully.
- A composite score (verbal and quantitative) on the Graduate Records Examination (GRE) of no less than 1100 (1500 preferred). International students must show proficiency in English by scoring 550 or higher on the TOEFL (Test of

English as a Foreign Language) examination, or by completing the University's Advanced Level of the Intensive English as a Second Language Program.

Qualified applicants may be admitted directly to the doctoral program after receiving a baccalaureate degree. These students will be required to complete an additional 30 hours of coursework at the 500 and 600 level under an individual plan developed in conjunction with the Chair of the Department's Graduate Studies Committee. Students with a B.S. in another branch of engineering, or in chemistry, mathematics, physics, or life sciences may be required to take up to 24 undergraduate units in mechanical engineering, and to demonstrate preparation comparable to that provided by an ABET accredited engineering program.

Master of Science in Mechanical Engineering

Major Code: ME

Degree Code: MS

Unit: GS

Department Webpage: <http://www.louisville.edu/speed/mechanical/>

Programs

The Department of Mechanical Engineering of the J. B. Speed School of Engineering offers a program of study leading to the degree of Master of Science. It also offers an integrated five-year program of cooperative education leading to the professional degree of Master of Engineering.

Admission to the M.S. Program

Applicants for admission to the M.S. program in Mechanical Engineering should have a baccalaureate degree in Mechanical Engineering or a related discipline, with a GPA of 2.75/4.0 or better. Unconditional admission requires a composite score (verbal and quantitative) of no less than 1100 on the Graduate Record Examination (1500 preferred). International students must show proficiency in English by scoring 550 or higher on the TOEFL (Test of English as a Foreign Language) examination, or by completing the University's Advanced Level of the Intensive English as a Second Language Program. An applicant not meeting a requirement, but with otherwise acceptable credentials, may be admitted on a conditional basis. New students will not be considered for financial aid until after one semester of residency.

Advising

Upon enrollment, a student will be advised by the Department's M.S. academic advisor. After completing at least 12, but not more than 18 semester hours of graduate work, a permanent thesis advisor must be chosen by the student and approved by the Department Chair. During the semester following the selection of the permanent advisor, the student and

thesis advisor should select the remaining two members of the thesis committee from among the graduate faculty, one of whom must be from outside the Mechanical Engineering Department.

Program Requirements

	Semester Hours	Total
Courses in Major		
ME 600-level (graduate only) courses (in addition to thesis)	9	
ME electives 500-600 level	6	
ME 690, thesis	6	
Courses Outside of Major		
Non-ME electives (500-600 level) ¹	9	
Minimum Total ²		30

Notes:

1. Non-mechanical engineering electives must be approved by the student's advisor. These courses usually lie in mathematics, computer science, or another engineering discipline.
2. A minimum of 12 hours of coursework, exclusive of thesis hours, must be taken at the 600-level.

Master of Engineering in Mechanical Engineering

Major Code: ME

Degree Code: MEN

Unit: SP

Department Webpage: <http://www.louisville.edu/speed/mechanical/>

General Information

The Mechanical Engineering Department in the J.B. Speed School of Engineering at the University of Louisville offers programs of study leading to the degrees of Master of Science and Doctor of Philosophy in Mechanical Engineering. It also offers an integrated five-year program with a cooperative education component that culminates in the Master of Engineering degree and is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET).

Higher Studies Division

ME 644 (3)

ME 697^{1,2} (6)

ME Program Electives^{3,4,5} (21)

1. Upon admission into the Higher Studies Division, M.Eng. candidates are assigned a faculty academic advisor. Thesis students are encouraged to select a thesis topic and advisor during the first term of the graduate/professional year. The thesis advisor then serves as the student's academic advisor. Students must obtain the consent of their thesis advisor prior to enrolling in ME 697.

2. The faculty of the Mechanical Engineering Department has approved a non-thesis M.Eng. curriculum alternative that permits students to satisfy EAC/ABET accreditation criteria by replacing the six M.Eng. thesis hours (ME 697) with one three-hour 600-level course selected from the list of approved Mechanical Engineering Program Electives, and a three-hour structured research project (ME 645).

3. At least 9 of the 21 program elective credit hours must be at the 600 level or above.

4. Courses to meet the program elective requirements are selected with the assistance of the student's advisor.

5. The Mechanical Engineering Department's B.Sc. curriculum includes 14.0 EAC/ABET design hours. The 500 and 600 level M.Eng. Program Electives must contain a minimum of 6.0 additional design hours.

6. The five-year total for the M.Eng. degree is 163 semester hours.

Master of Science in Mechanical Engineering

In addition to the Master of Engineering program, the Mechanical Engineering Department offers a Master of Science degree in Mechanical Engineering through the Graduate School. This program is appropriate for students not holding a mechanical engineering baccalaureate degree from the University of Louisville. Both thesis and non-thesis options are available. Consult the Graduate School catalog for degree requirements and contact information.

Doctor of Philosophy in Mechanical Engineering

Through the Graduate School, the Mechanical Engineering Department offers a program of study leading to the Doctor of Philosophy degree in Mechanical Engineering. This program

provides an opportunity for students to complete advanced course work and conduct independent research in one of a number of specialization areas. Those interested in the Ph.D. program should consult the Graduate School catalog for requirements and contact information.

Departmental Faculty

Professors

Glen Prater, Jr., *Chair*

W. Geoffrey Cobourn

Michael L. Day, *Assistant Dean*

William P. Hnat

Ronald A. Mann

M. Keith Sharp

Larry D. Tyler

Julius P. Wong

Associate Professors

Gina Bertocci, *Endowed Chair of Biomechanics*

Ellen G. Brehob, *Associate Chair*

Timothy E. Dowling

Peter Quesada

Assistant Professors

Roger D. Bradshaw

Andrea L. Knox-Kelecy

Christopher M. Richards

Ali M. Shahhosseini

Joris Leijnse

Associated Faculty

Michael J. Voor, *Orthopedic Medicine*

Adjunct Assistant Professors

Claudia Angeli

Surya S. Patel

Instructor

Lubov P. Andrusiv

Emeritus Faculty

Hsing Chuang

Robert L. Collins

George C. Lindauer

Robert E. Stewart

Master of Engineering in Engineering Management

Major Code: EM

Degree Code: MEN

Unit: SP

Department Webpage: <http://www.louisville.edu/speed/industrial/>

General Information

The Master of Engineering with specialization in Engineering Management (M.Eng. EM) is a professional degree offered by the Speed School of Engineering. It is a part time, evening degree program open only to those students who have graduated from an ABET-accredited engineering degree program.

Admission

A requirement for admission to the program is that the applicant possesses a bachelor's degree in engineering from a college or university offering programs which are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology. In addition, it is expected that the student be actively engaged in full-time professional employment during the period of enrollment in the degree program.

Prerequisite Requirements

The assumption is made that entering students are reasonably competent in a computer programming language such as Visual Basic, C++, etc.

Degree Requirements

Students may choose either a thesis curriculum or an alternative curriculum that permits graduation without preparation of a thesis. If the thesis curriculum is selected, the student must submit a written thesis and present it orally before an examining committee. In order to emphasize the strong orientation of the program toward the solution of ongoing practical problems in the management of technological enterprises, every effort is made to select a thesis topic which involves regular employment experience. The ability of the student to perform an in-depth study of such a problem with the guidance and assistance of a faculty advisory committee is judged to be an important part of the program under the thesis option

In the alternative curriculum for the Master of Engineering degree, the six (6) semester hours of thesis credits are replaced with three (3) semester hours of additional engineering management or industrial engineering approved course electives, plus the three (3) semester-hour course EM 699 Engineering Management Project. The purpose of the project is to provide the student with an opportunity to practically utilize, in a real world setting, an amalgam of subject matter from the engineering management discipline, and to demonstrate the ability to com-

municate effectively both orally and in writing. The requirements for the Master of Engineering degree, with specialization in the field of engineering management are as follows:

Course/Credit Hours

Required Courses

- EM 515, Operations Management (3)
- EM 525, Project Management (3)
- EM 561, Engineering Statistics I (3)
- EM 582, Management of Human Systems (3)
- EM 628, Engineering Management (3)
- EM 670, Engineering Financial Management (3)
- EM or IE electives (6)

Thesis Alternative

- EM 690, M.Eng. Thesis in Engineering Management (6)

Non-Thesis Alternative

- EM 699, Engineering Management Project (3)
- EM or IE elective (3)

TOTAL = 30 semester credits ¹

Notes: ¹. The requirements of the Kentucky Council on Post-secondary Education specify that a minimum of 12 semester hours (excluding thesis or report credits) must be completed in courses at the 600-level or above for the Master of Engineering degree.

Advising

M.Eng. EM candidates will be advised by the M.Eng. EM Program Coordinator, Dr. William E. Biles.

Certificate in Environmental Engineering

Certificate Program only. Not a degree program. Awarded only with completion of a graduate degree program (M. Eng., M.S., Ph.D.) at Speed School of Engineering.

Admission Requirements:

1. Admission to the Speed School of Engineering Division of Higher Studies (M.Eng.) or the Graduate School (M.S. or Ph.D) in Engineering.
2. Approval of an Application for the Environmental Engineering Certificate Program

Curriculum

	Semester Hours	Total
Environmental Engineering Electives (500-level)	0-6	
Environmental Engineering Electives (600-level)	6-12	12

Courses are to be selected from the following:

- CEE 509 Environmental Process Systems
- CEE 534 Industrial Waste Management
- CEE 535 Solid Waste Management
- CEE 561 Environmental Analysis of Transportation Systems I
- CEE 570 Applied Hydraulics
- CEE 571 Applied Hydrology
- CEE 572 Open Channel Hydraulics
- CEE 573 Groundwater Hydrology
- CEE 670 Advanced Hydraulics
- CEE 673 Advanced Hydrology
- CEE 674 Water Resource Systems
- CEE 675 Surface Water Quality
- CHE 509 Environmental Process Systems
- CHE 620 Transport Phenomena I
- CHE 637 Advanced Stagewise Processes
- CHE 638 Advanced Absorption
- CHE 650 Membrane Separations
- CHE 662 Advanced Process Control
- CHE 533 Chemical Engineering Safety and Health
- CHE 534 Industrial Waste Management
- CHE 535 Pollution Prevention (Waste Reduction Treatment and Disposal)
- CHE 572 Plant Process and Project Design
- ME 580 Air Pollution Control
- CHEM 622 Analytical Separations
- BIOL 521 Stream Ecology
- BIOL 522 Aquatic Ecology
- BIOL 568 Conservation Biology
- BIOL 662 Ecosystems Ecology

Note:

- Graduate courses not shown in the list above require approval from the Certificate Program Director.
- Certificate courses do not constitute a degree program, but may be applied toward M.Eng., M.S., or Ph.D. degree requirements.

Other requirements:

Completion of graduate degree program at Speed School of Engineering (M.Eng., M.S., or Ph.D.).

Institutional Accreditation and Memberships

Institutional Accreditation

The University of Louisville is accredited by:

The Commission on Colleges
The Southern Association of Colleges and Schools
1866 Southern Lane
Decatur, Georgia 30033-4907
Telephone number (404) 679-4501

to award associate, bachelor, master's, doctoral, and first professional degrees (D.M.D., J.D., M.D.).

Institutional Memberships

For institutional memberships, see the web listing at:

<http://graduate.louisville.edu/catalog/index.php?id=accreditation>

Professional Accreditation

For professional accreditation, see the web listing at:

<http://graduate.louisville.edu/catalog/index.php?id=accreditation>

University Administration

James R. Ramsey, Ph.D.

President

Shirley C. Willihnganz, Ph.D.

Executive Vice President and
University Provost

Larry N. Cook, M.D.

Executive Vice President and
Chancellor for Health Affairs

Nancy C. Martin, Ph.D.

Senior Vice President for Research

Michael J. Curtin, M.B.A.

Vice President for Finance

Ronald L. Moore, J.D.

Vice President for Information Technology

Larry L. Owsley, M.P.P., M.P.A.

Vice President for Business Affairs

Joseph S. Beyel, M.S.

Vice President for University Advancement

Daniel Hall, J.D.

Vice President for External Affairs

Thomas M. Jurich, B.A.

Vice President for Athletics

Administrative Officers of the Graduate School**Ronald M. Atlas, Ph.D.**

Dean of the Graduate School

Michael J. Cuyjet, Ed.D.

Associate Dean of the Graduate School

Richard W. Stremel, Ph.D.

Associate Dean of the Graduate School

Deans**J. Blaine Hudson, Ed.D.**

College of Arts and Sciences

R. Charles Moyer, Ph.D.

College of Business

Rowland A. Hutchinson, D.D.S.

School of Dentistry

Acting Dean

Robert D. Felner, Ph.D.

College of Education and Human Development

Ronald M. Atlas, Ph.D.

Graduate School

Terry L. Singer, Ph.D.

Kent School of Social Work

David Ensign, J.D.

School of Law

Acting Dean

Mark Pfeifer, M.D.

School of Medicine

Interim Dean

Christopher P. Doane, Ph.D.

School of Music

Mary H. Mundt, Ph.D.

School of Nursing

Richard D. Clover, M.D.

School of Public Health and Information Sciences

Mickey R. Wilhelm, Ph.D.

J. B. Speed School of Engineering

Hannelore Rader, M.L.S.

University Librarian

Graduate Council (2005 – 2006)

Annette Allen, Ph.D.

Associate Professor of Humanities

College of Arts and Sciences

Tim Brauch, GSC President

Mathematics

College of Arts and Sciences

Namok Choi, Ph.D.

Associate Professor of Leadership, Foundations and Human

Resource Education

College of Education and Human Development

Evelyne Gozal, Ph.D.

Associate Professor of Pediatrics/Pharmacology & Toxicology

School of Medicine

Susan M. Griffin, Ph.D.

Professor of English

College of Arts and Sciences

Mahesh Gupta, Ph.D.

Professor of Management

College of Business and Public Administration

Vicki Hines-Martin, Ph.D.

Associate Professor of Nursing

School of Nursing

Carlton A. Hornung, Ph.D.

Professor of Epidemiology: Clinical Investigation Sciences

School of Public Health and Information Sciences

Ruth Huber, Ph.D.

Professor of Social Work

Kent School of Social Work

Lawrence A. Hunt, Ph.D.

Associate Professor of Microbiology and Immunology

School of Medicine

Waldemar Karwowski, Ph.D.

Professor of Industrial Engineering

J. B. Speed School of Engineering

Carolyn Muriel Klinge, Ph.D.

Associate Professor of Biochemistry and Molecular Biology

School of Medicine

Kathleen Klueber, Ph.D.

Associate Professor of Anatomical Sciences and Neurobiology

School of Medicine

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Associate Professor of Teaching and Learning

College of Education and Human Development

Seow-Chin Ong, Ph.D.

Assistant Professor of Music History
School of Music

George Pack, Ph.D.

Professor of Chemistry
College of Arts and Sciences

Rammohan K. Ragade, Ph.D.

Professor of Computer Engineering and Computer Science
J. B. Speed School of Engineering

Prasanna (Ron) Sahoo, Ph.D.

Professor of Mathematics
College of Arts and Sciences

David Scott, Ph.D.

Associate Professor of Perio, Endo & Dental Hygiene
School of Dentistry

Joseph M. Steffen, Ph.D.

Associate Professor of Biology
College of Arts and Sciences

Nancy Theriot, Ph.D.

Associate Professor of Women's and Gender Studies
College of Arts and Sciences

James L. Wittliff, Ph.D.

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School of Medicine

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Ph.D., University of Maryland
Professor of History

Ayotunde S. O. Adeagbo (Senior)

Ph.D., University of Ibadan
Associate Professor of Physiology and Biophysics

Pascale Alard (Senior)

Ph.D., University of Paris XI
Assistant Professor of Microbiology and Immunology

James E. Alexander, Jr. (Senior)

Ph.D., University of Oklahoma
Visiting Assistant Professor of Biology

Suraj Mammen Alexander (Senior)

Ph.D., Virginia Polytechnic Institute and State University
Professor of Engineering Management and Industrial Engineering

Ann Taylor Allen (Senior)

Ph.D., Columbia University
Professor of History

Annette Allen (Senior)

Ph.D., University of Texas
Associate Professor of Humanities

Bruce W. Alphenaar (Senior)

Ph.D., Yale University
Associate Professor of Electrical and Computer Engineering

Robert A. Amchin (Senior)

Ph.D., University of Michigan
Professor of Music Education

David Anderson (Senior)

Ph.D., University of Pennsylvania
Associate Professor of English

Gary L. Anderson (Senior)

Ph.D., University of Arizona
Professor of Physiology and Biophysics

Damon P.S. Andrew (Member)

Ph.D., Florida State University
Assistant Professor of Health Promotion, P.E. and Sport Studies

Becky F. Antle (Member)

Ph.D., University of Louisville
Assistant Professor of Social Work

Deborah S. Armstrong (Senior)

Ph.D., University of Kentucky
Assistant Professor of Nursing

George R. Aronoff (Senior)

M.D., Indiana University
Professor of Medicine in Nephrology
Professor of Pharmacology and Toxicology

Graduate Faculty

There are two levels of Graduate Faculty Membership:

- A *Member* of the Graduate Faculty is authorized to teach graduate courses, serve on graduate student advisory committees, and co-chair Master's Theses.
- A *Senior Member* of the Graduate Faculty is authorized to teach graduate courses, serve on graduate advisory committees, and serve as thesis and dissertation advisors and chairs (mentors). Both levels of membership have the authority to serve on thesis and dissertation committees.

Robert D. Acland (Senior)

M.B., London Hospital Medical College
Professor of Surgery
Associate in Anatomical Sciences and Neurobiology
Associate in Physiology and Biophysics

David H. Adamkin (Senior)

M.D., State University of New York- Syracuse
Professor of Pediatrics

Arthur J. Adams (Senior)

Ph.D., University of Iowa
Professor of Business Statistics

Gavin E. Arteel (Senior)

Ph.D., University of North Carolina
Associate Professor of Pharmacology and Toxicology

Jack Ashworth (Senior)

D.M.A., Stanford University
Professor of Music History

Ronald M. Atlas (Senior)

Ph.D., Rutgers University
Professor of Biology
Professor in the Center for Deterrence of Biowarfare and Bioterrorism

D. Mark Austin (Senior)

Ph.D., University of Oklahoma
Associate Professor of Sociology

Antonio Badia (Senior)

Ph.D., Indiana University
Associate Professor Computer Engineering and Computer Science

Lateef O. Badru (Senior)

Ph.D., State University of New York at Stony Brook
Associate Professor of Sociology
Associate Professor of Pan-African Studies

Barbara Baker (Senior)

Ph.D., Wayne State University
Professor of Surgery

Richard P. Baldwin (Senior)

Ph.D., Purdue University
Professor of Chemistry

Anita P. Barbee (Senior)

Ph.D., University of Georgia
Professor of Social Work

Gerard M. Barber (Senior)

Ph.D., Brandeis University
Professor of Social Work

John H. Barker (Senior)

M.D., University of Cordoba
Ph.D., University of Heidelberg
Professor of Surgery
Associate in Anatomical Sciences and Neurobiology

George R. Barnes (Senior)

Ph.D., University of California, Irvine
Professor of Mathematics

Charles C. Barr (Senior)

M.D., Johns Hopkins Medical School
Professor of Ophthalmology and Visual Sciences

Shirish Barve (Senior)

Ph.D., University of Kentucky
Professor of Gastroenterology/Hepatology

Paula J. Bates (Senior)

Ph.D., University of London
Associate Professor of Medicine in Hematology and Oncology and Associate Professor of Biochemistry and Molecular Biology

Lora Battle-Bailey (Member)

Ph.D., Auburn University
Associate Professor of Teaching and Learning

Debra K. Bauder (Senior)

Ed.D., University of Kentucky
Associate Professor of Teaching and Learning

Kathy B. Baumgartner (Senior)

Ph.D., University of Texas
Associate Professor of Epidemiology and Clinical Investigation

Richard N. Baumgartner (Senior)

Ph.D., University of Texas
Distinguished University Professor of Epidemiology and Clinical Investigation

Sidney J. Baxendale (Senior)

D.B.A., Indiana University
Professor of Accountancy

Cathy L. Bays (Member)

Ph.D., University of Cincinnati
Associate Professor of Nursing

Blake Raymond Beattie (Senior)

Ph.D., University of Toronto
Associate Professor of History

James Kevin Beggan (Senior)

Ph.D., University of California, Santa Barbara
Associate Professor of Psychological and Brain Sciences
Associate Professor of Sociology

Frederick W. Benz (Senior)

Ph.D., University of Iowa
Professor of Pharmacology and Toxicology

Gina E. Bertocci (Senior)

Ph.D., University of Pittsburgh
Professor of Mechanical Engineering

Nageshwar R. Bhaskar (Senior)

Ph.D., The Ohio State University
Professor of Civil and Environmental Engineering

Aruni Bhatnagar (Senior)

Ph.D., University of Kanpur, India
Professor of Cardiology
Professor of Pharmacology and Toxicology

Kunwar P. Bhatnagar (Senior)

Ph.D., State University of New York at Buffalo
Professor of Anatomical Sciences and Neurobiology

Matthew Biberman (Senior)

Ph.D., Duke University
Associate Professor of English

Martha E. Bickford (Senior)

Ph.D., Duke University
Professor of Anatomical Sciences and Neurobiology

William E. Biles (Senior)

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Professor of Industrial Engineering
Edward Reep Clark Chair of Computer Aided Engineering

Dale Billingsley (Senior)

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Professor of English

Karen Bishop (Member)

Ph.D., University of Alabama
Assistant Professor of Management

Pat B. Blackwell (Member)

Ph.D., Purdue University
Assistant Professor of Surgery in Speech Pathology

Linda K. Bledsoe (Senior)

Ph.D., University of Louisville Assistant
Assistant Professor of Social Work

Mark E. Blum (Senior)

Ph.D., University of Pennsylvania
Professor of History

Haribabu Bodduluri (Member)

Ph.D., Indian Institute of Science
Professor of Microbiology and Immunology
Professor of Pharmacology and Toxicology

Beth Boehm (Senior)

Ph.D., The Ohio State University
Associate Professor of English

Roberto Bolli (Senior)

M.D., University of Perugia, Italy
Professor of Cardiology Jewish Hospital Heart and Lung Institute
Distinguished Chair in Cardiology

Nalini S. Bora (Senior)

Ph.D., All India Institute of Medical Science
Professor Ophthalmology and Visual Sciences
Professor of Microbiology and Immunology

Puran S. Bora (Senior)

Ph.D., Kumaun University, Italy
Professor of Ophthalmology and Visual Sciences

Douglas C. Borchman (Senior)

Ph.D., Wayne State University
Professor of Ophthalmology and Visual Sciences
Associate in Biochemistry and Molecular Biology

Steven C. Bourassa (Senior)

Ph.D., University of Pennsylvania
Professor of Urban and Public Affairs

Lynn H. Boyd (Senior)

Ph.D., University of Georgia
Associate Professor of Management

Mike A. Boyle (Senior)

Ph.D., Texas A & M University
Associate Professor of Leadership, Foundations and Human Resource Education

Mary E. Bradley (Senior)

Ph.D., University of Virginia
Associate Professor of Mathematics

Roger D. Bradshaw (Senior)

Ph.D., Northwestern University
Assistant Professor of Mechanical Engineering

Jay T. Brandi (Senior)

Ph.D., University of Arizona
Professor of Finance

Ellen G. Brehob (Senior)

Ph.D., Pennsylvania State University
Associate Professor of Mechanical Engineering

Mark D. Brennan (Senior)

Ph.D., Indiana University
Professor of Biochemistry and Molecular Biology

Michael E. Brier (Senior)

Ph.D., Purdue University
Professor of Medicine in Nephrology
Associate in Pharmacology and Toxicology

Mark D. Brennan (Senior)

Ph.D., Indiana University
Professor of Biochemistry and Molecular Biology

Leonard Bright (Member)

Ph.D., Portland State University
Assistant Professor of Urban and Public Affairs

Betty C. Brown (Senior)

Ph.D., Virginia Polytechnic Institute and State University
Professor of Accountancy

David N. Brown (Senior)

Ph.D., Purdue University
Associate Professor of Physics

Elizabeth Todd Brown (Member)

Ph.D., University of Louisville
Assistant Professor of Teaching and Learning

Garry Brown (Senior)

M.F.A., University of Memphis
Associate Professor of Theatre Arts

Joseph H. Brown (Senior)

Ph.D., Indiana University
Professor of Family Therapy

Reginald A. Bruce (Senior)

Ph.D., University of Michigan
Associate Professor of Management

Rhonda L. Buchanan (Senior)

Ph.D., University of Colorado
Professor of Classical and Modern Languages

Robert M. Buchanan (Senior)

Ph.D., University of Colorado
Professor of Chemistry

Julie Bunck (Senior)

Ph.D., University of Virginia
Associate Professor of Political Science

Barbara M. Burns (Senior)

Ph.D., Brown University
Professor of Psychological and Brain Sciences

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